

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

12. Diagnostic Procedure with Diagnostic Trouble Code (DTC)

A: COMMUNICATION FOR INITIALIZING IMPOSSIBLE

NOTE:

- DTC is displayed in the sequence of the amount of counter numbers.
- When more than two DTCs are displayed, perform the diagnosis of top one.

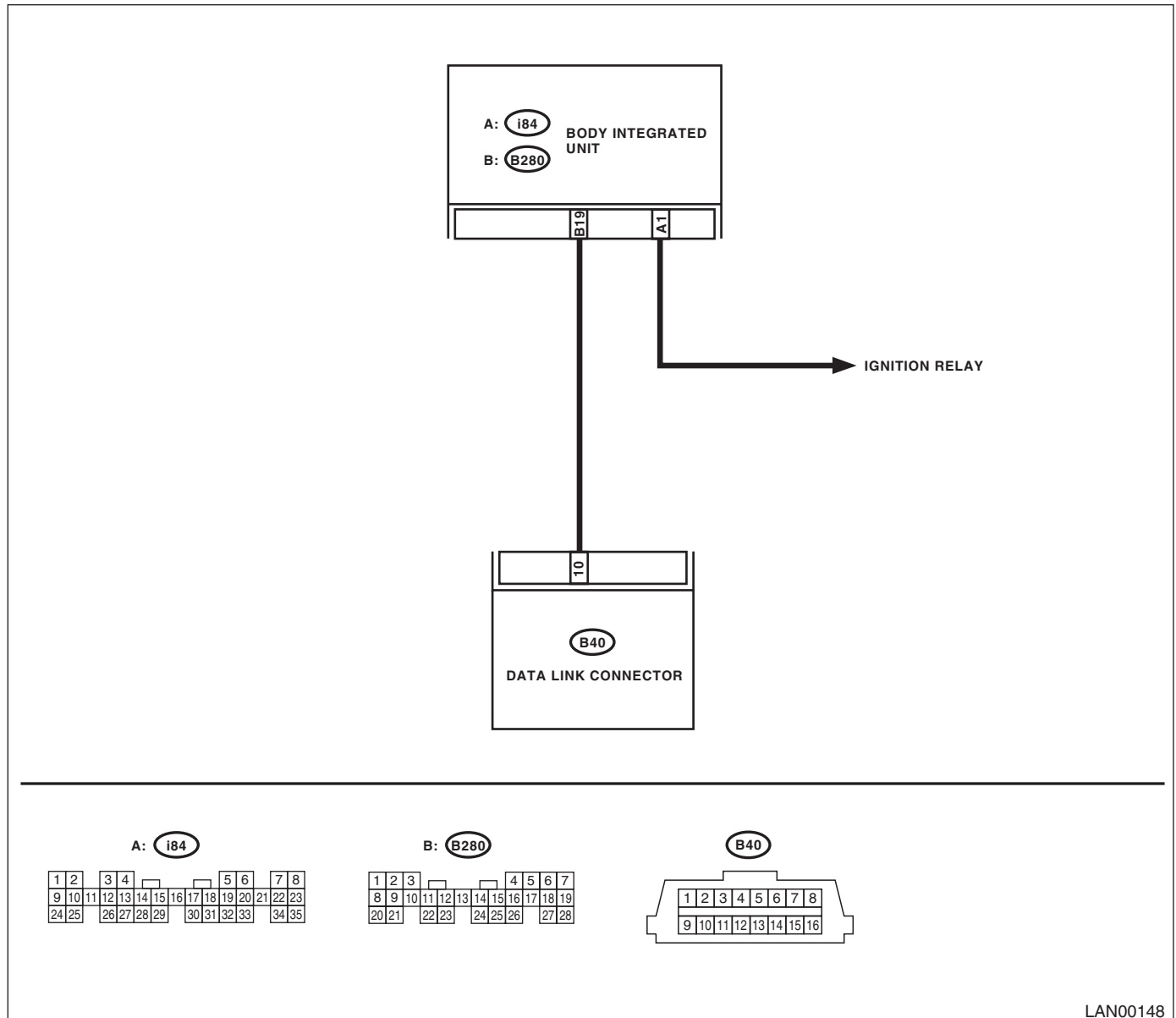
DIAGNOSIS:

Subaru Select Monitor communication line is open or shorted.

TROUBLE SYMPTOM:

Not communicable with Subaru Select Monitor.

WIRING DIAGRAM:



LAN00148

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No	
1	CHECK IGNITION SWITCH.	Is the ignition switch ON?	Go to step 2.	Turn the ignition switch to ON, and select Integ. Unit mode using Subaru Select Monitor.
2	CHECK BATTERY. 1) Turn the ignition switch to OFF. 2) Measure the battery voltage.	Is the voltage 11 V or more?	Go to step 3.	Charge or replace the battery.
3	CHECK BATTERY TERMINAL.	Is there poor contact at the battery terminal?	Repair or tighten the battery terminal.	Go to step 4.
4	CHECK COMMUNICATION OF SUBARU SELECT MONITOR. 1) Turn the ignition switch to ON. 2) Using the Subaru Select Monitor, check whether communication to other systems can be executed normally.	Are system and model year displayed?	Go to step 7.	Go to step 5.
5	CHECK COMMUNICATION OF SUBARU SELECT MONITOR. 1) Turn the ignition switch to OFF. 2) Disconnect the body integrated unit connector. 3) Turn the ignition switch to ON. 4) Check whether communication to other systems can be executed normally.	Are system and model year displayed?	Go to step 7.	Go to step 6.
6	CHECK HARNESS CONNECTOR BETWEEN EACH CONTROL UNIT AND SUBARU SELECT MONITOR. 1) Turn the ignition switch to ON. 2) Disconnect the body integrated unit connector. 3) Measure the resistance between data link connector and chassis ground. Connector & terminal (B40) No. 10 — Chassis ground:	Is the resistance 1 MΩ or more?	Go to step 7.	Repair the harness and connector between each control unit and Subaru Select Monitor.
7	CHECK OUTPUT SIGNAL TO BODY INTEGRATED UNIT. 1) Turn the ignition switch to ON. 2) Measure the voltage between body integrated unit and chassis ground. Connector & terminal (B40) No. 10 (+) — Chassis ground (-):	Is the voltage less than 1 V?	Go to step 8.	Repair the harness and connector between each control unit and Subaru Select Monitor.
8	CHECK HARNESS CONNECTOR BETWEEN BODY INTEGRATED UNIT AND DATA LINK CONNECTOR. Measure the resistance between body integrated unit and data link connector. Connector & terminal (B40) No. 10 — (B280) No. 19:	Is resistance less than 1 Ω?	Go to step 9.	Repair the harness and connector between body integrated unit and Subaru Select Monitor.
9	CHECK INSTALLATION OF BODY INTEGRATED UNIT CONNECTOR. Turn the ignition switch to OFF.	Is the body integrated unit connector inserted into body integrated unit until the clamp locks onto it?	Go to step 10.	Insert the body integrated unit connector into body integrated unit.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
10 CHECK POWER SUPPLY CIRCUIT. 1) Turn the ignition switch to ON (engine OFF). 2) Measure the ignition voltage between body integrated unit connector and chassis ground. Connector & terminal (i84) No. 1 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Go to step 11.	Repair the open circuit of harness between body integrated unit and battery.
11 CHECK HARNESS CONNECTOR BETWEEN BODY INTEGRATED UNIT AND CHASSIS GROUND. 1) Turn the ignition switch to OFF. 2) Disconnect the connector from body integrated unit. 3) Measure the resistance of harness between the body integrated unit and chassis ground. Connector & terminal (B280) No. 19 — Chassis ground:	Is the resistance 1 MΩ or more?	Go to step 12.	Repair the poor contact of harness between body integrated unit and ground.
12 CHECK POOR CONTACT OF CONNECTORS.	Is there poor contact at control unit ground and Subaru Select Monitor?	Repair the poor contact of connector.	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>

CAUTION:

When replacing body integrated unit on the model with immobilizer system, refer to the “REGISTRATION MANUAL FOR IMMOBILIZER”.

B: DIAGNOSTIC TROUBLE CODE (DTC) IS NOT STORED

DIAGNOSIS:

Defective combination meter

TROUBLE SYMPTOM:

- Communication error display in odometer/trip meter is not cleared.
- “No trouble code” is displayed on Subaru Select Monitor.

NOTE:

If DTC is not displayed on Subaru Select Monitor, LAN communication system should be OK.

Step	Check	Yes	No
1 CHECK COMMUNICATION ERROR DISPLAY WITH COMBINATION METER. Turn the ignition switch to ON.	Is communication error displayed?	Inspect the DTC.	Go to step 2.
2 CHECK COMBINATION METER. Perform the self-diagnosis of combination meter.	Is combination meter OK?	Go to step 3.	Replace the combination meter. <Ref. to IDI-14, Combination Meter.>
3 CHECK THE BODY INTEGRATED UNIT. 1) Display the current data of ECM using Subaru Select Monitor. 2) Check data of “body integrated unit data received”.	Is “Yes” displayed?	Go to step 4.	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>
4 CHECK THE BODY INTEGRATED UNIT. 1) Display the current data of ECM using Subaru Select Monitor. 2) Check data of “body Integrated unit counter update”.	Is “Yes” displayed?	Repair the poor contact of connector.	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

C: DTC B0100 INTEG. UNIT SYSTEM ERROR

DTC DETECTING CONDITION:

System error in body integrated unit

TROUBLE SYMPTOM:

- Check light comes on in the combination meter, and displays communication error display “Er IU”.
- LAN communication immobilizer function may not be executed normally.

	Step	Check	Yes	No
1	CHECK ALL DTCS.	Is DTC concerning ECM displayed?	Go to step 2.	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>
2	CHECK DTC CONCERNING ECM.	Is output DTC on ECM concerning CAN communication failure?	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>	Perform the diagnosis according to DTC concerning ECM.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

D: DTC B0101 BATT P/SUPPLY MALFUNCTION CONT.

DTC DETECTING CONDITION:

Battery power supply control circuit is open or shorted.

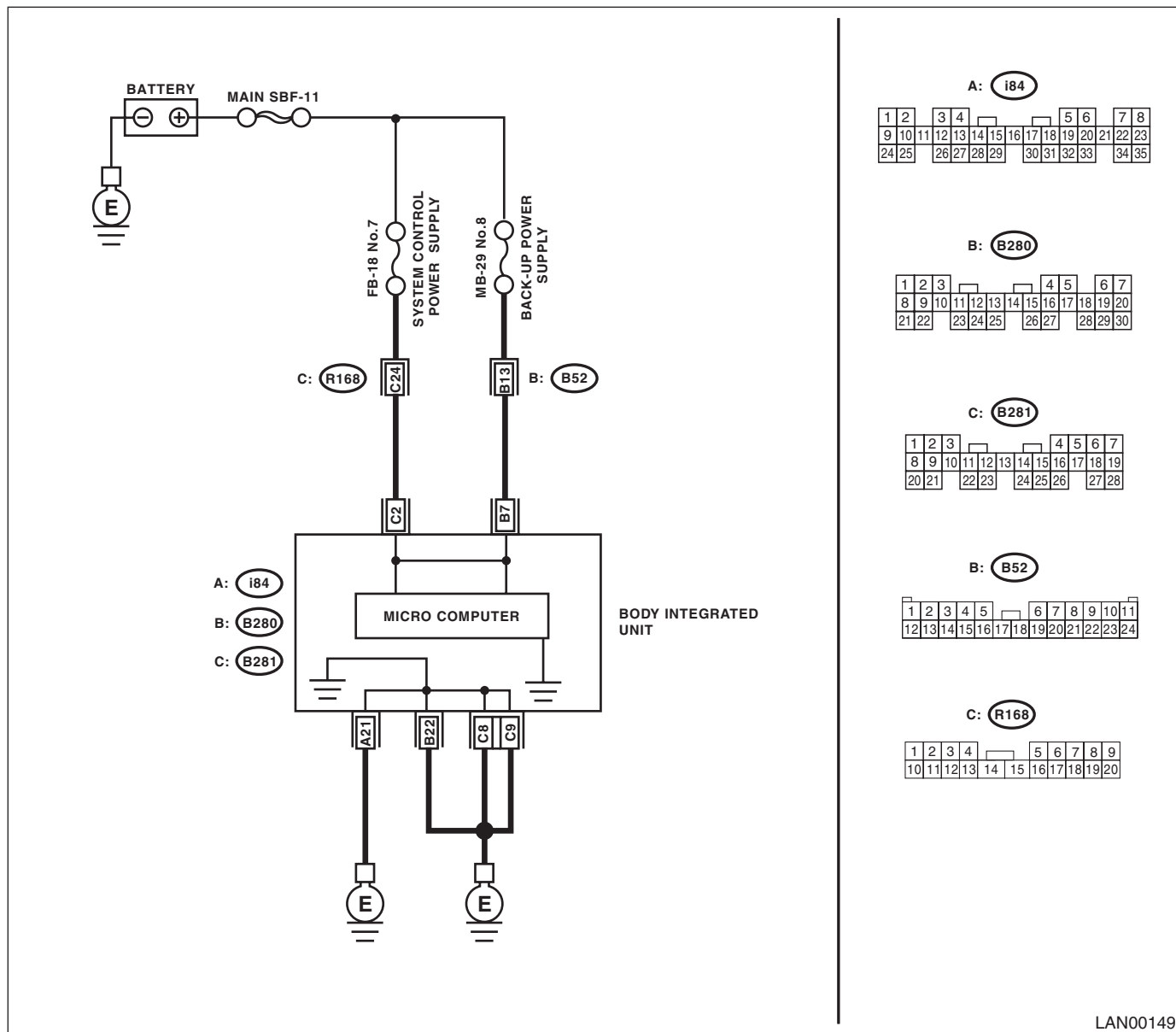
TROUBLE SYMPTOM:

No malfunction occurs because the back-up power supply is activated.

NOTE:

When B0102 BATT p/supply (backup) malfunction is output at the same time, all the function of body integrated unit may not operate.

WIRING DIAGRAM:



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK FUSE. 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 7).	Is the fuse blown out?	Replace the fuse (No. 7). If the replaced fuse has blown out easily, repair the short circuit of harness between fuse (No. 7) and body integrated unit.	Go to step 2.
2 CONTINUITY CHECK OF WIRING HARNESS. 1) Disconnect the connector (B281) from body integrated unit. 2) Measure the voltage between body integrated unit connector and chassis ground. <i>Connector & terminal</i> <i>(B281) No. 2 (+) — Chassis ground (-):</i>	Is the voltage 10 V or more?	Go to step 3.	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3 CHECK POOR CONTACT OF CONNECTORS.	Is there poor contact in body integrated unit connector?	Repair the poor contact of connector.	Go to step 4.
4 CHECK BODY INTEGRATED UNIT HARNESS. 1) Connect all connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>	Temporary poor contact occurs.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

E: DTC B0102 BATT P/SUPPLY MALFUNCTION CONT.

DTC DETECTING CONDITION:

Battery power supply backup circuit is open or shorted.

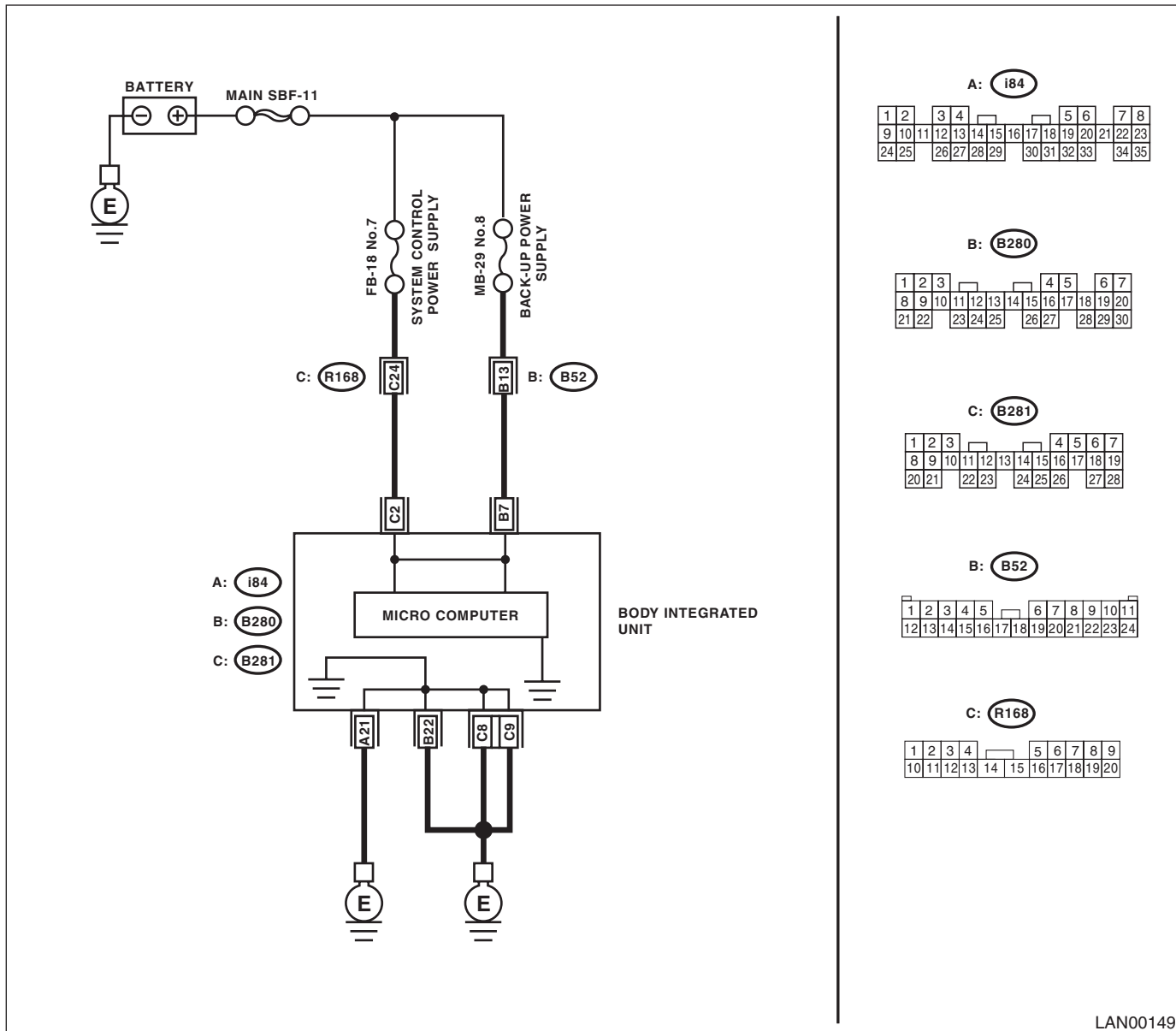
TROUBLE SYMPTOM:

- Engine malfunction indicator light may illuminate.
- Keyless entry, room light and key illumination do not operate.
- "En IU" may display in combination meter.

NOTE:

When some B0101 BATT p/supply malfunction cont. are output at the same time, all function of body integrated unit may not function.

WIRING DIAGRAM:



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK FUSE. 1) Turn the ignition switch to OFF. 2) Remove fuse (No. 8).	Is the fuse blown out?	Replace fuse (No. 8). If the replaced fuse has blown out easily, repair the short circuit of harness between fuse (No. 8) and body integrated unit.	Go to step 2.
2 CONTINUITY CHECK OF WIRING HARNESS. 1) Disconnect the connector (B280) from body integrated unit. 2) Measure the voltage between body integrated unit connector and chassis ground. <i>Connector & terminal</i> <i>(B280) No. 7 (+) — Chassis ground (-):</i>	Is the voltage 10 V or more?	Go to step 3.	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3 CHECK POOR CONTACT OF CONNECTORS.	Is there poor contact in body integrated unit connector?	Repair the poor contact of connector.	Go to step 4.
4 CHECK BODY INTEGRATED UNIT HARNESS. 1) Connect all connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>	Temporary poor contact occurs.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

F: DTC B0103 IGNITION POWER FAILURE

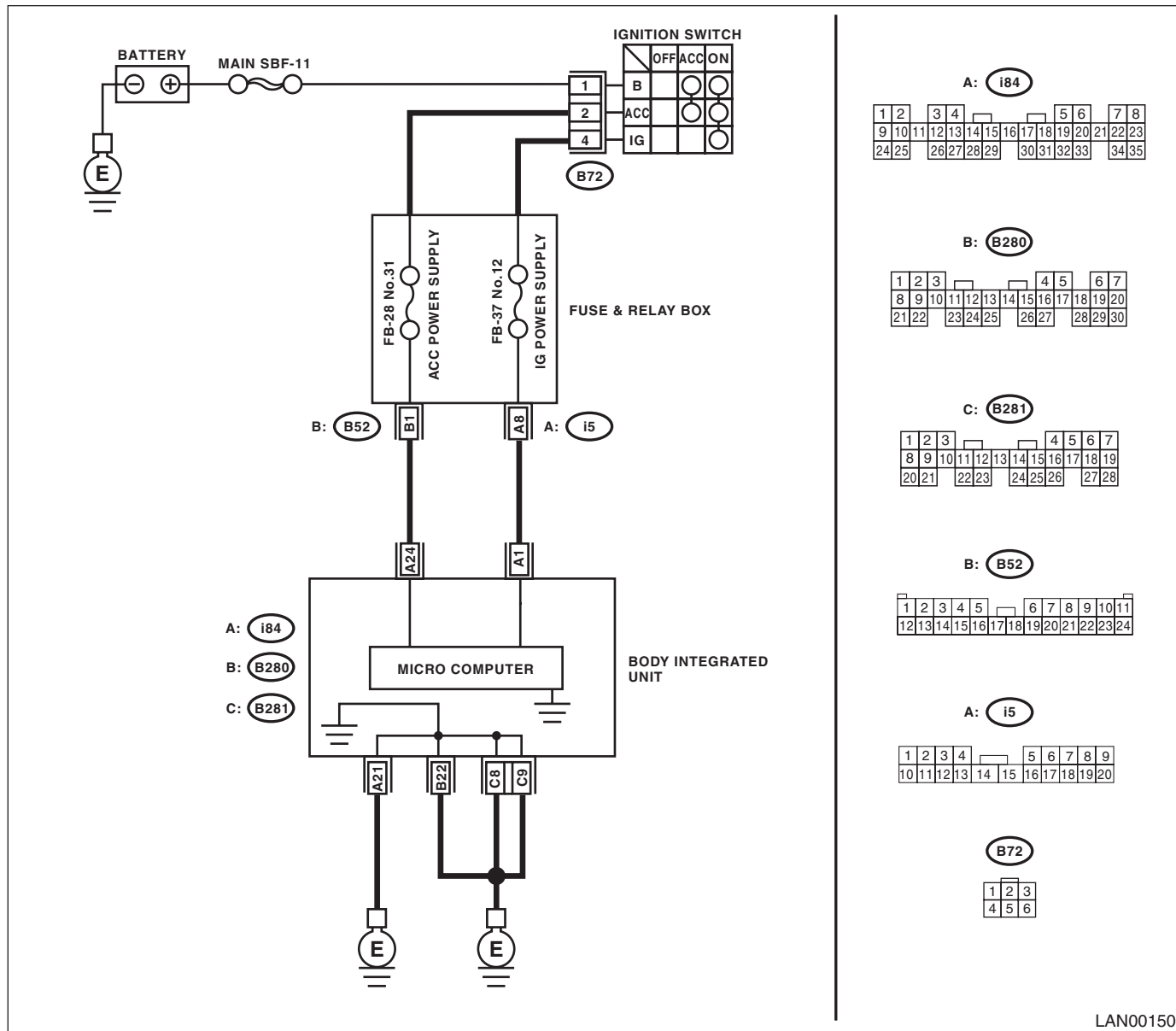
DTC DETECTING CONDITION:

IGN power supply circuit is open or shorted.

TROUBLE SYMPTOM:

Symptoms such as illuminating the malfunction indicator light or high speed CAN error display "Er HC" may occur.

WIRING DIAGRAM:



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK FUSE. 1) Turn the ignition switch to OFF. 2) Remove the fuse (No. 12).	Is the fuse blown out?	Replace fuse (No. 12). If the replaced fuse has blown out easily, repair the short circuit of harness between fuse (No. 12) and body integrated unit.	Go to step 2.
2 CONTINUITY CHECK OF WIRING HARNESS. 1) Disconnect the connector (i84) from body integrated unit. 2) Turn the ignition switch to ON. 3) Measure the voltage between body integrated unit connector and chassis ground. Connector & terminal (i84) No. 1 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Go to step 3.	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3 CHECK POOR CONTACT IN CONNECTOR.	Is there poor contact in body integrated unit connector?	Repair the poor contact of connector.	Go to step 4.
4 CHECK BODY INTEGRATED UNIT HARNESS. 1) Connect all connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is the same DTC displayed?	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>	Temporary poor contact occurs.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

G: DTC B0104 ACC POWER FAILURE

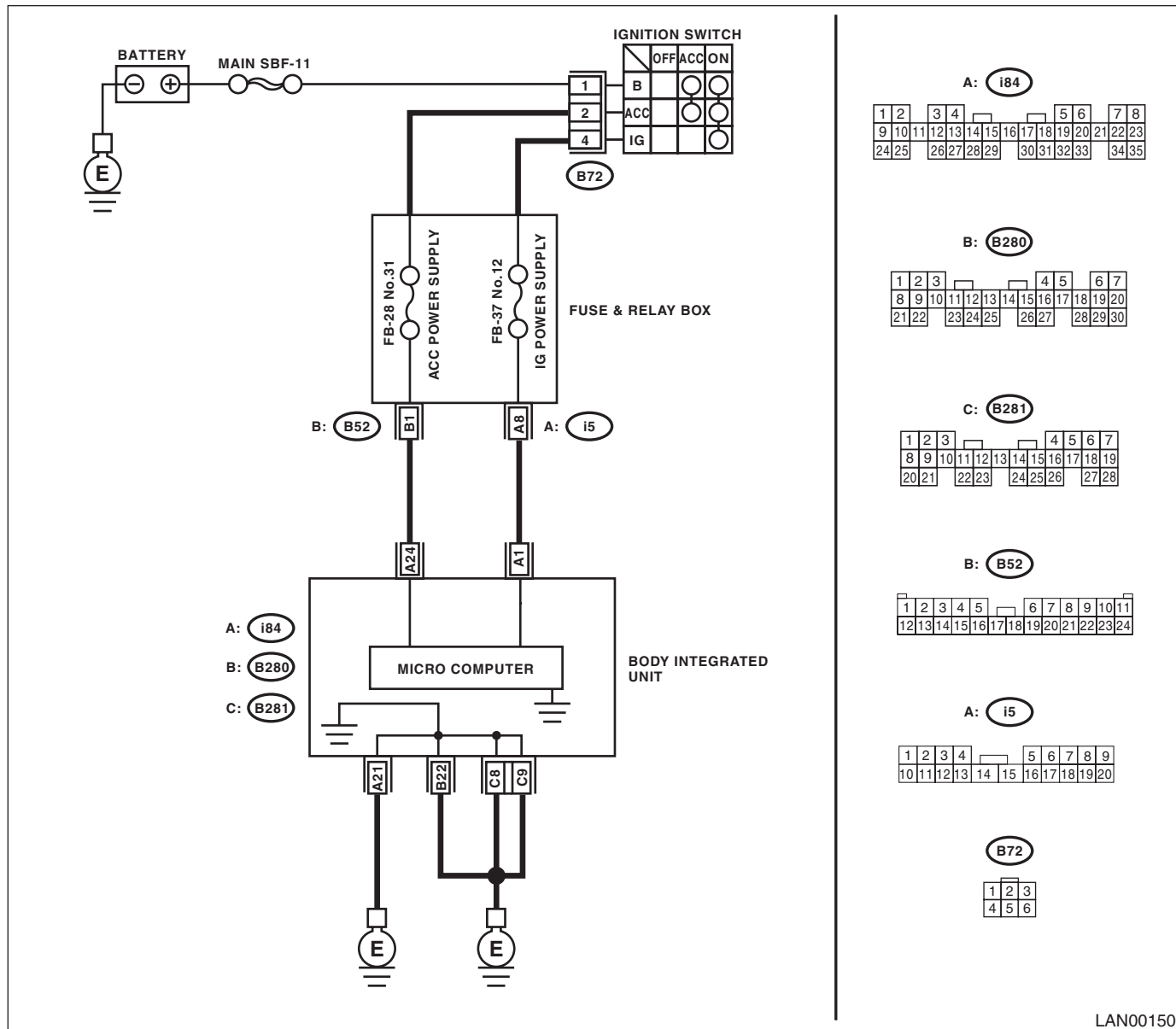
DTC DETECTING CONDITION:

ACC power supply circuit is open or shorted.

TROUBLE SYMPTOM:

Rear wiper may not operate at ACC position.

WIRING DIAGRAM:



LAN00150

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK FUSE. 1) Turn the ignition switch to OFF. 2) Remove fuse (No. 31).	Is the fuse blown out?	Replace fuse (No. 31). If the replaced fuse has blown out easily, repair the short circuit of harness between fuse (No. 31) and body integrated unit.	Go to step 2.
2 CONTINUITY CHECK OF WIRING HARNESS. 1) Disconnect the connector (i84) from body integrated unit. 2) Turn the ignition switch to ON. 3) Measure the voltage between body integrated unit connector and chassis ground. Connector & terminal (i84) No. 24 (+) — Chassis ground (-):	Is the voltage 10 V or more?	Go to step 3.	Repair the harness for open or shorted circuit between body integrated unit and fuse.
3 CHECK POOR CONTACT IN CONNECTOR.	Is there poor contact in body integrated unit connector?	Repair the poor contact of connector.	Go to step 4.
4 CHECK BODY INTEGRATED UNIT HARNESS. 1) Connect all connectors. 2) Perform the Clear Memory Mode. 3) Read DTC.	Is DTC displayed?	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>	Temporary poor contact occurs.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

H: DTC B0105 KEY INTERLOCK CIRCUIT ABNORMAL

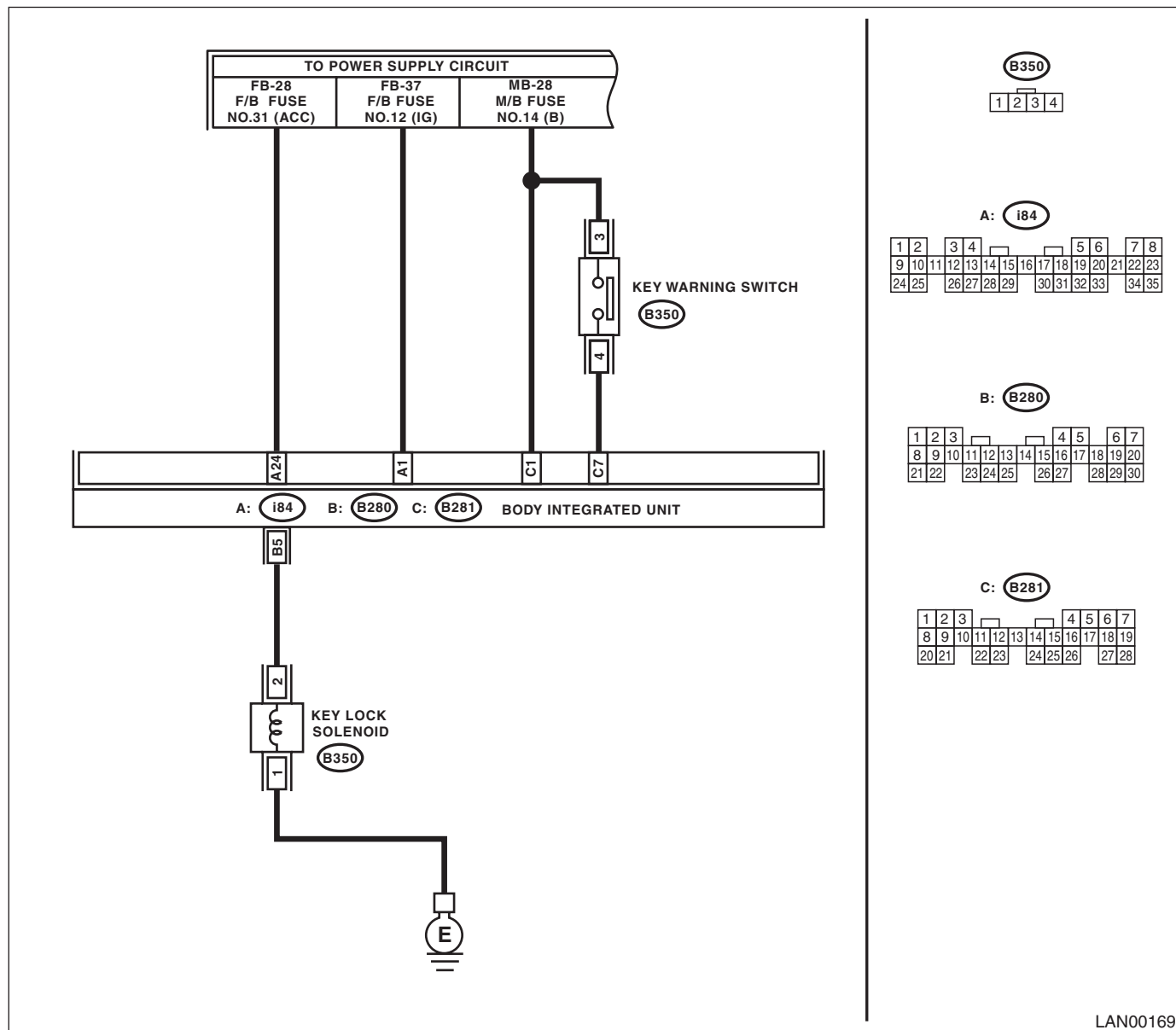
DTC DETECTING CONDITION:

Key interlock circuit is shorted to ground.

TROUBLE SYMPTOM:

- No input of key interlock power supply
- Key interlock does not release or remain locked.

WIRING DIAGRAM:



LAN00169

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
1	<p>CHECK KEY LOCK SOLENOID. 1) Disconnect the connector of the key lock solenoid. 2) Measure the internal resistance of key lock solenoid. <i>Connector & terminal</i> <i>(B350) No. 1 — No. 2:</i></p>	<p>Is the resistance between 10 — 30 Ω?</p>	<p>Go to step 2.</p>	<p>Replace the key lock solenoid.</p>
2	<p>CHECK GROUND CIRCUIT. 1) Disconnect the connector of the key lock solenoid. 2) Measure the resistance between the key lock solenoid connector and chassis ground. <i>Connector & terminal</i> <i>(B350) No. 1 — Chassis ground:</i></p>	<p>Is resistance less than 10 Ω?</p>	<p>Go to step 3.</p>	<p>Check the key lock solenoid ground circuit for open circuit or for proper installation, and repair the ground circuit if faulty.</p>
3	<p>CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280) and the key lock solenoid connector (B350). 2) Measure the resistance between body integrated unit connector and chassis ground. <i>Connector & terminal</i> <i>(B280) No. 5 — Chassis ground:</i></p>	<p>Is the resistance 1 MΩ or more?</p>	<p>Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.></p>	<p>Repair the short circuit of harness or replace harness.</p>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

I: DTC B0106 SHIFT LOCK CIRCUIT FAILURE

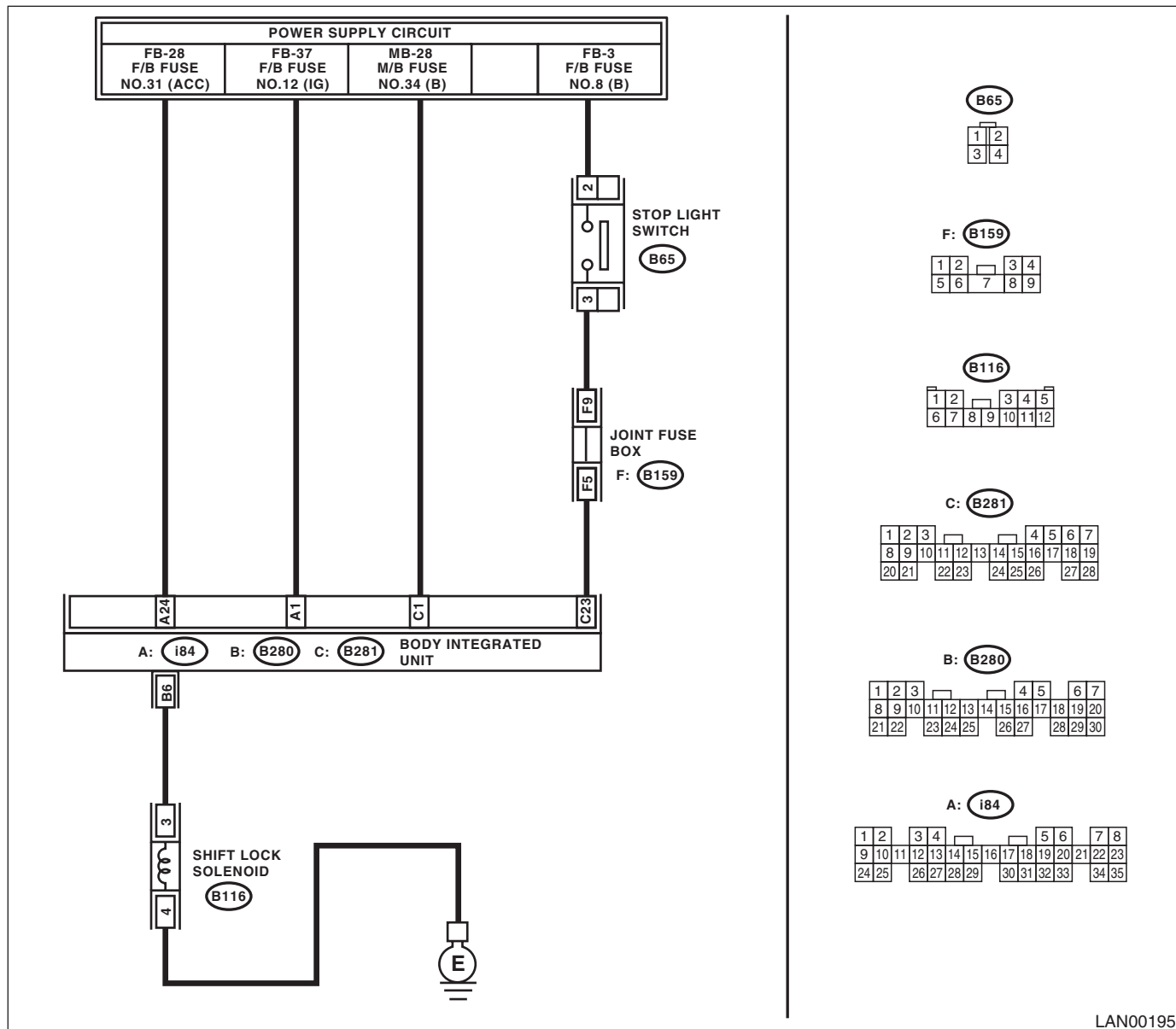
DTC DETECTING CONDITION:

Shift lock circuit is shorted to ground.

TROUBLE SYMPTOM:

Shift lock does not be released or remain locked.

WIRING DIAGRAM:



LAN00195

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between body integrated unit connector and chassis ground. Connector & terminal (B280) No. 6 — Chassis ground:	Is the resistance between 10 and 30 Ω ?	Go to step 5.	Go to step 2.
2 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280). 2) Disconnect the shift lock solenoid connector. 3) Measure the resistance between body integrated unit connector and shift lock solenoid connector. Connector & terminal (B280) No. 6 — (B116) No. 3:	Is resistance less than 10 Ω ?	Go to step 3.	Repair or replace the open or short circuit of harness.
3 CHECK SHIFT LOCK SOLENOID. 1) Disconnect the shift lock solenoid connector. 2) Measure the internal resistance of shift lock solenoid. Connector & terminal (B116) No. 3 — No. 4:	Is the resistance between 10 and 30 Ω ?	Go to step 4.	Replace the shift lock solenoid.
4 CHECKING THE GROUND CIRCUIT. 1) Disconnect the shift lock solenoid connector. 2) Measure the resistance between the shield connector and chassis ground. Connector & terminal (B116) No. 4 — Chassis ground:	Is resistance less than 10 Ω ?	Temporary poor contact occurs. Check the connection of each terminal and repair when necessary.	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>
5 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280) and shift lock solenoid connector (B116). 2) Measure the resistance between body integrated unit connector (B280) and chassis ground. Connector & terminal (B280) No. 6 — Chassis ground:	Is the resistance 1 M Ω or more?	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>	Repair the short circuit of harness or replace harness.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

J: DTC B0201 CAN-HS COUNTER ABNORMAL

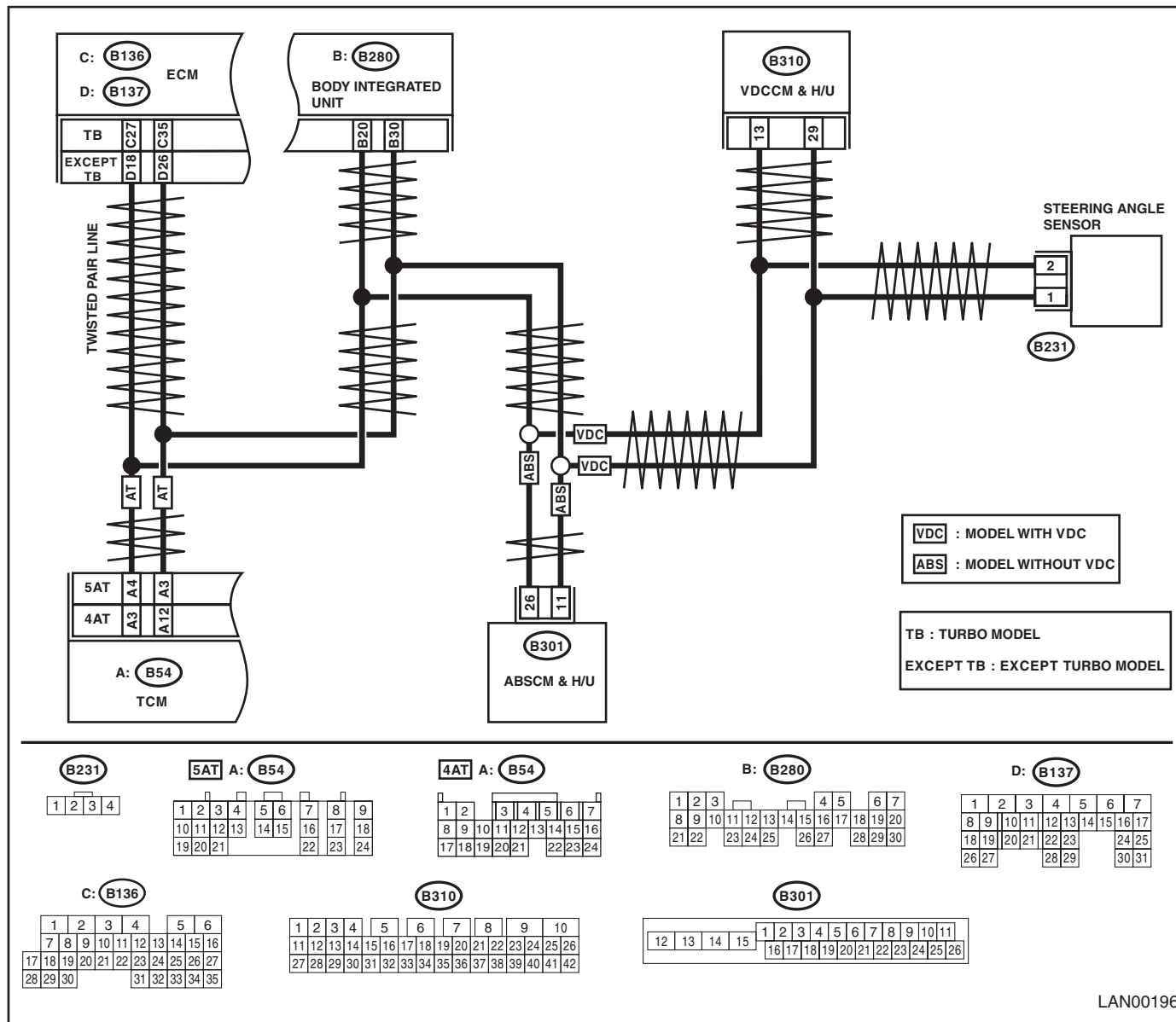
DTC DETECTING CONDITION:

High speed CAN communication of body integrated unit which monitor the error data and non-received data are faulty.

TROUBLE SYMPTOM:

- "Er HC" is displayed in odo/trip meter.
- Malfunction indicator light illuminates.

WIRING DIAGRAM:



LAN00196

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280). 2) Connect the tester to vehicle side connector, and measure the resistance. Connector & terminal (B280) No. 20 — No. 30:	Is the resistance between 55 and 65 Ω?	Go to step 2.	Go to step 4.
2 CHECK HARNESS. 1) Disconnect the TCM connector (B54). 2) Connect the tester to vehicle side connector, and measure the resistance. Connector & terminal (B54) No. 3 — No. 4:	Is the resistance between 55 and 65 Ω?	Go to step 3.	Go to step 4.
3 CHECK HARNESS. 1) Disconnect the steering angle sensor connector (B231). 2) Connect the tester to vehicle side connector, and measure the resistance. Connector & terminal (B231) No. 1 — No. 2:	Is the resistance between 55 and 65 Ω?	Go to step 11.	Go to step 4.
4 CHECK HARNESS.	Is the measured resistance 115 — 125 Ω when connecting the tester to vehicle side connector?	Go to step 7.	Go to step 5.
5 CHECK HARNESS.	Is the measured resistance less than 10 Ω when connecting the tester to vehicle side connector?	Repair or replace the short circuit of measured related harness.	Go to step 6.
6 CHECK HARNESS.	Is the measured resistance more than 30 MΩ when connecting the tester to vehicle side connector?	Repair or replace the open circuit of measured related harness.	Go to step 11.
7 CHECK HARNESS. 1) Disconnect the VDCCM connector. 2) Connect the tester to vehicle side harness, and measure the resistance. Connector & terminal (B310) No. 20 — No. 34: (B301) No. 11 — No. 26:	Is the resistance between 115 — 125 Ω?	Go to step 8.	Go to step 9.
8 CHECK CONTROL MODULE. Connect the tester to the VDC/ABSCM terminal, and measure the resistance. Connector & terminal (B310) No. 20 — No. 34: (B301) No. 11 — No. 26:	Is the resistance between 115 — 125 Ω?	Go to step 9.	Replace the VDC/ABSCM. <Ref. to VDC-16, REPLACEMENT, Steering Angle Sensor.>
9 CHECK HARNESS. 1) Connect the VDC/ABSCM connector. 2) Disconnect the connector from ECM. 3) Connect the tester to vehicle side harness, and measure the resistance between terminals. Connector & terminal Turbo model: (B136) No. 27 — No. 35: All models excluding turbo model: (B137) No. 18 — No. 26:	Is the resistance between 115 — 125 Ω?	Go to step 10.	Repair or replace the open circuit of main wiring harness.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
10 CHECK CONTROL MODULE. Connect the tester to ECM terminal, and measure the resistance. Connector & terminal Turbo model: (B136) No. 27 — No. 35: All models excluding turbo model: (B137) No. 18 — No. 26:	Is the resistance between 115 — 125 Ω ?	Repair or replace the open circuit of main wiring harness.	Replace the ECM. <Ref. to FU(H4SO)-36, REMOVAL, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-38, REMOVAL, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, REMOVAL, Engine Control Module (ECM).>
11 CHECK HARNESS. 1) Connect the control module connectors except body integrated unit. 2) Connect the tester to vehicle side harness. 3) Turn the ignition switch to ON, and measure the terminal voltage. Connector & terminal (B280) No. 20 — Chassis ground:	Is the voltage 6 V or more?	Go to step 12.	Go to step 13.
12 CHECK CONTROL MODULE. Disconnect each control module connector one by one with the tester connected to vehicle side harness.	Is there any module for which the voltage has changed to less than 6 V?	Replace the module that has become less than 6V.	Repair or replace the short circuit of the harness.
13 CHECK HARNESS. 1) Connect the control module connectors except body integrated unit connector. 2) Connect the tester between vehicle side harness and chassis ground, and measure the resistance. Connector & terminal (B280) No. 20 — Chassis ground: (B280) No. 30 — Chassis ground:	Is the resistance 1 M Ω or more?	Go to step 14.	Repair or replace the short circuit of the harness.
14 CHECK CONTROL MODULE. Disconnect each control module connector one by one with the tester connected to vehicle side harness.	Are there any modules for which the resistance has become more than 10 Ω ?	Replace modules which has changed to more than 10 Ω .	Go to step 15.
15 CHECK CONTROL MODULE. 1) Connect all the control module connectors. 2) Connect the Subaru Select Monitor and perform the clear memory. 3) Disconnect the TCM connector (B54). 4) Turn the ignition switch to ON and read the DTC of the body integrated unit. <Ref. to LAN(diag)-12, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC B0201 displayed?	Go to step 16.	Replace the TCM. <Ref. to 5AT-56, REMOVAL, Transmission Control Module (TCM).> <Ref. to 4AT-62, REMOVAL, Transmission Control Module (TCM).>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
16 CHECK CONTROL MODULE. 1) Connect the TCM control module connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Disconnect the steering angle sensor connector (B231). 4) Turn the ignition switch to ON and read the DTC of the body integrated unit. <Ref. to LAN(diag)-12, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC B0201 displayed?	Go to step 17.	Replace the steering angle sensor. <Ref. to VDC-16, REPLACEMENT, Steering Angle Sensor.>
17 CHECK CONTROL MODULE. 1) Connect all the control module connectors. 2) Check the data of "body integrated unit data received" on the current data display of ECM using Subaru Select Monitor.	Is the "Yes" displayed?	Go to step 18.	Replace the body integrated unit. <Ref. to SL-55, REMOVAL, Body Integrated Unit.>
18 CHECK CONTROL MODULE. Check the data of "body integrated unit counter update" on the data display of ECM.	Is the "Yes" displayed?	Replace the ECM. <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>	Replace the body integrated unit. <Ref. to SL-55, REMOVAL, Body Integrated Unit.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

K: DTC B0202 CAN-HS BUS OFF

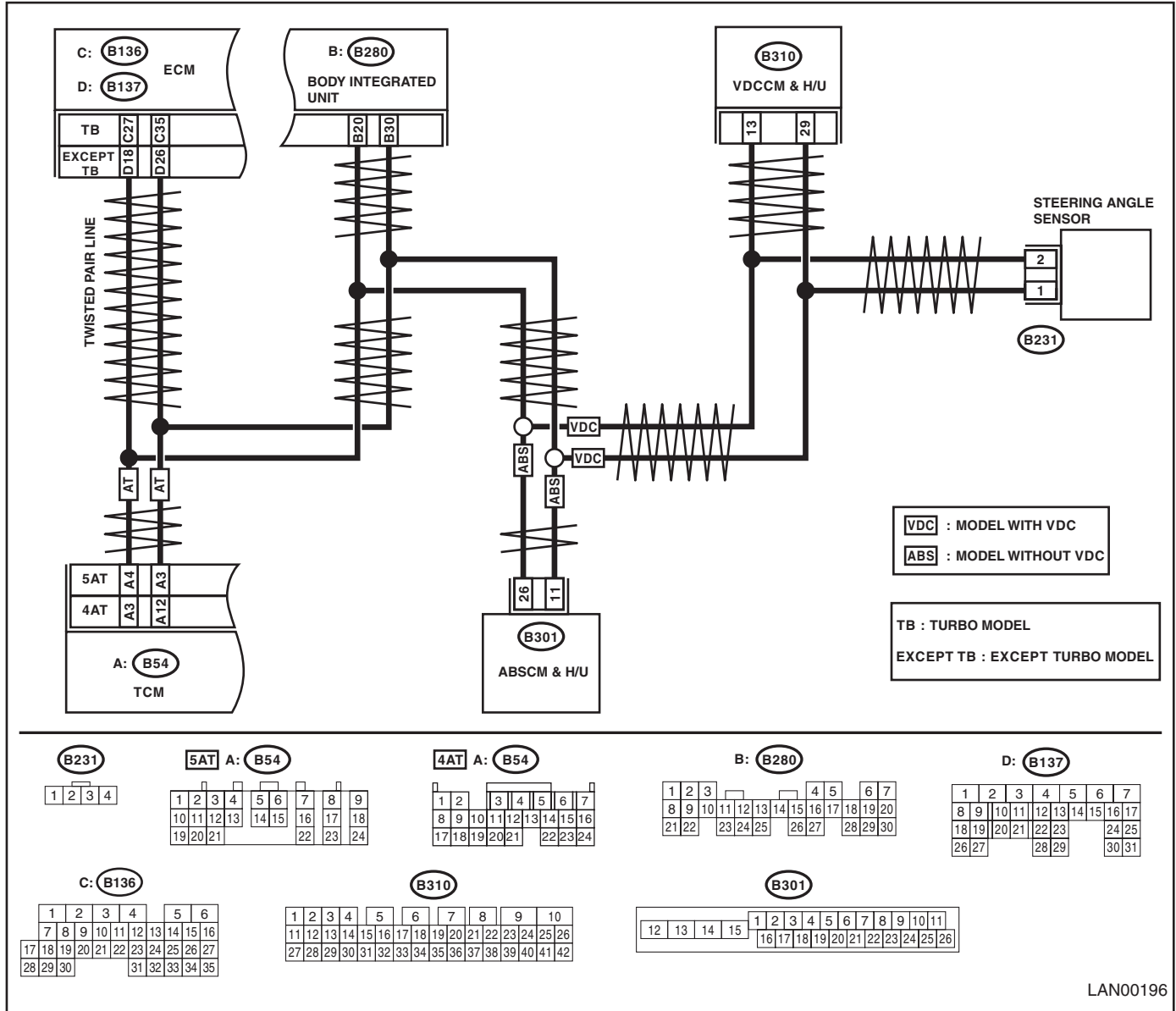
DTC DETECTING CONDITION:

- Find the unit or CAN line in which trouble occurs, and repair and replace it.
- Not received data and error data may be detected at the same time.

TROUBLE SYMPTOM:

“Er HC” is displayed in odo/trip meter.

WIRING DIAGRAM:



LAN00196

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
1	CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280). 2) Connect the tester to vehicle side connector, and measure the resistance. Connector & terminal (B280) No. 20 — No. 30:	Is the resistance between 55 and 65 Ω ?	Go to step 2.	Go to step 4.
2	CHECK HARNESS. 1) Disconnect the TCM connector (B54). 2) Connect the tester to vehicle side connector, and measure the resistance. Connector & terminal (B54) No. 3 — No. 4:	Is the resistance between 55 and 65 Ω ?	Go to step 3.	Go to step 4.
3	CHECK HARNESS. 1) Disconnect the steering angle sensor connector (B231). 2) Connect the tester to vehicle side connector, and measure the resistance. Connector & terminal (B231) No. 1 — No. 2:	Is the resistance between 55 and 65 Ω ?	Go to step 11.	Go to step 4.
4	CHECK HARNESS.	Is the measured resistance 115 — 125 Ω when connecting the tester to vehicle side connector?	Go to step 7.	Go to step 5.
5	CHECK HARNESS.	Is the measured resistance less than 10 Ω when connecting the tester to vehicle side connector?	Repair or replace the short circuit of measured related harness.	Go to step 6.
6	CHECK HARNESS.	Is the measured resistance more than 30 M Ω when connecting the tester to vehicle side connector?	Repair or replace the open circuit of measured related harness.	Go to step 11.
7	CHECK HARNESS. 1) Disconnect the VDCCM connector. 2) Connect the tester to vehicle side harness, and measure the resistance. Connector & terminal (B310) No. 20 — No. 34: (B301) No. 11 — No. 26:	Is the resistance between 115 — 125 Ω ?	Go to step 8.	Go to step 9.
8	CHECK CONTROL MODULE. Connect the tester to the VDC/ABSCM terminal, and measure the resistance. Connector & terminal (B310) No. 20 — No. 34: (B301) No. 11 — No. 26:	Is the resistance between 115 — 125 Ω ?	Go to step 15.	Replace the VDCCM. <Ref. to VDC-7, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>
9	CHECK HARNESS. 1) Connect the VDCCM connector. 2) Disconnect the connector from ECM. 3) Connect the tester to vehicle side harness, and measure the resistance between terminals. Connector & terminal Turbo model: (B136) No. 27 — No. 35: All models excluding turbo model: (B137) No. 18 — No. 26:	Is the resistance between 115 — 125 Ω ?	Go to step 10.	Repair or replace the open circuit of main wiring harness.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
10 CHECK CONTROL MODULE. Connect the tester to ECM terminal, and measure the resistance. <i>Connector & terminal</i> <i>Turbo model: (B136) No. 27 — No. 35:</i> <i>All models excluding turbo model: (B137) No. 18 — No. 26:</i>	Is the resistance between 115 — 125 Ω ?	Go to step 11.	Replace the ECM. <Ref. to FU(H4DOTC)-38, REMOVAL, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>
11 CHECK HARNESS. 1) Connect the control module connectors except body integrated unit. 2) Connect the tester to vehicle side harness. 3) Turn the ignition switch to ON, and measure the terminal voltage. <i>Connector & terminal</i> <i>(B280) No. 20 — Chassis ground:</i>	Is the voltage 6 V or more?	Go to step 12.	Go to step 13.
12 CHECK CONTROL MODULE. Disconnect each control module connector one by one with the tester connected to vehicle side harness.	Is there any module for which the voltage has changed to less than 6 V?	Replace the module that has become less than 6 V.	Repair or replace the short circuit of the harness.
13 CHECK HARNESS. 1) Connect the control module connectors except body integrated unit connector. 2) Connect the tester between vehicle side harness and chassis ground, and measure the resistance. <i>Connector & terminal</i> <i>(B280) No. 20 — Chassis ground:</i> <i>(B280) No. 30 — Chassis ground:</i>	Is the resistance 1 M Ω or more?	Go to step 14.	Repair or replace the short circuit of the harness.
14 CHECK CONTROL MODULE. Disconnect each control module connector one by one with the tester connected to vehicle side harness.	Are there any modules for which the resistance has become more than 10 Ω ?	10 Replace the module which its resistance changes to more than 10 Ω .	Repair or replace the short circuit of the harness.
15 CHECK CONTROL MODULE. 1) Connect all the control module connectors. 2) Connect the Subaru Select Monitor and perform the clear memory. 3) Disconnect the TCM connector (B54). 4) Turn the ignition switch to ON and read the DTC of body integrated unit. <Ref. to LAN(diag)-12, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC B0201 displayed?	Go to step 16.	Replace the TCM. <Ref. to 5AT-56, REMOVAL, Transmission Control Module (TCM).>
16 CHECK CONTROL MODULE. 1) Connect the TCM control module connector. 2) Using the Subaru Select Monitor, perform the clear memory. 3) Disconnect the steering angle sensor connector (B231). 4) Turn the ignition switch to ON and read the DTC of the body integrated unit. <Ref. to LAN(diag)-12, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC B0201 displayed?	Go to step 17.	Replace the steering angle sensor. <Ref. to VDC-16, REPLACEMENT, Steering Angle Sensor.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
17 CHECK CONTROL MODULE. 1) Connect all the control module connectors. 2) Check the data of "body integrated unit data received" on the current data display of ECM using Subaru Select Monitor.	Is the "Yes" displayed?	Go to step 18 .	Replace the body integrated unit. <Ref. to SL-55, REMOVAL, Body Integrated Unit.>
18 CHECK CONTROL MODULE. Check the data of "body integrated unit counter update" on the data display of ECM.	Is the "Yes" displayed?	Replace the ECM. <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>	Replace the body integrated unit. <Ref. to SL-55, REMOVAL, Body Integrated Unit.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

L: DTC B0211 CAN-HS ECM DATA ABNORMAL

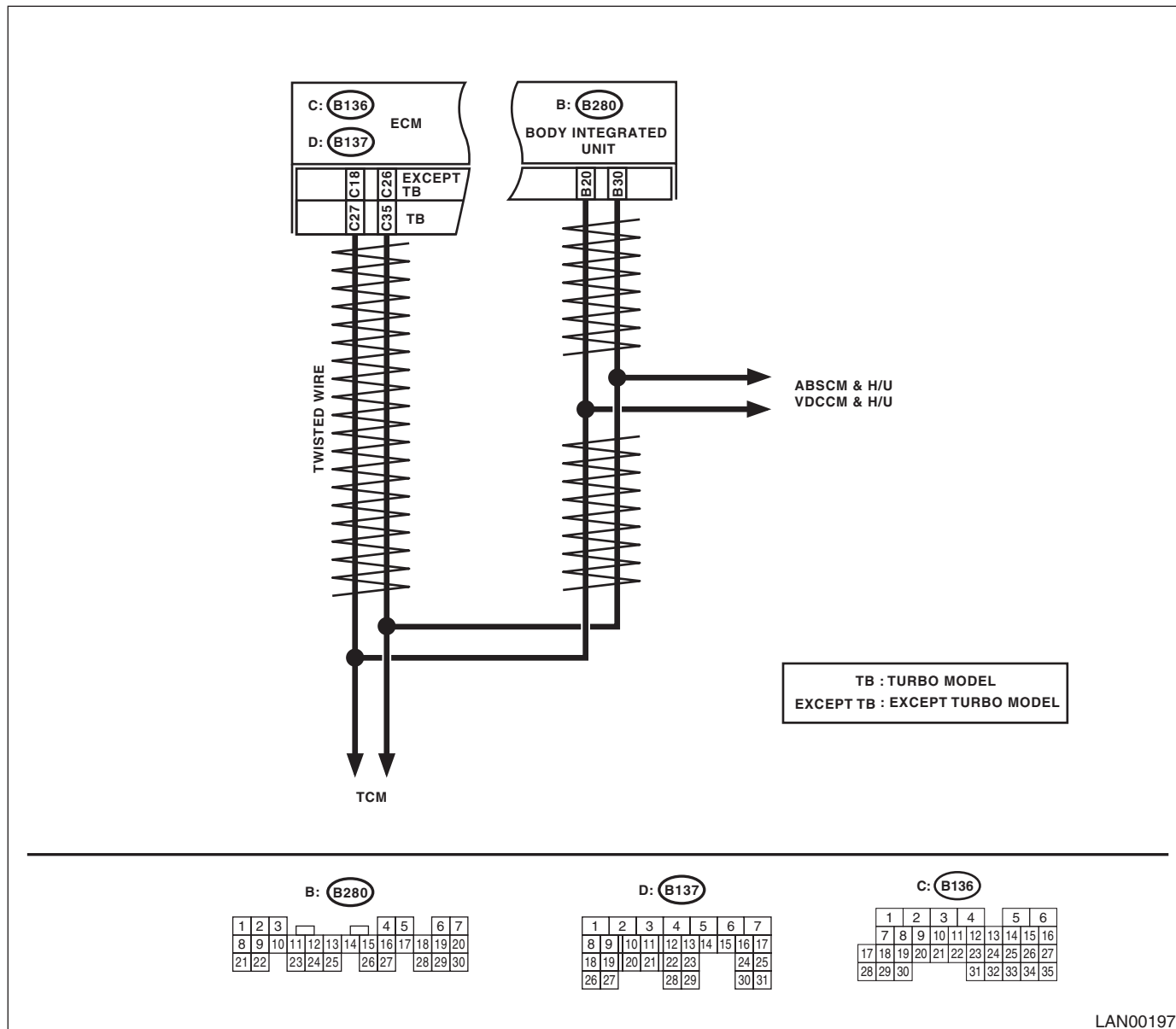
DTC DETECTING CONDITION:

Defective data from ECM.

TROUBLE SYMPTOM:

“Er HC” or “Er EG” is displayed in odo/trip meter.

WIRING DIAGRAM:



LAN00197

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
1	CHECK ECM. Read the DTC of ECM using the Subaru Select Monitor.	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the ECM. <Ref. to FU(H4SO)-36, Engine Control Module (ECM).> <Ref. to FU(H4DOTC)-38, Engine Control Module (ECM).> <Ref. to FU(H6DO)-33, Engine Control Module (ECM).>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

M: DTC B0212 CAN-HS TCM DATA ABNORMAL

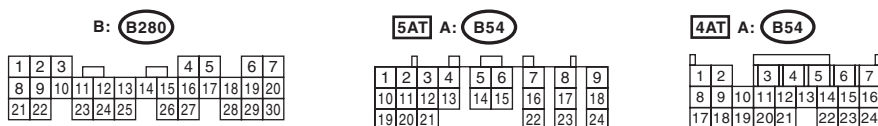
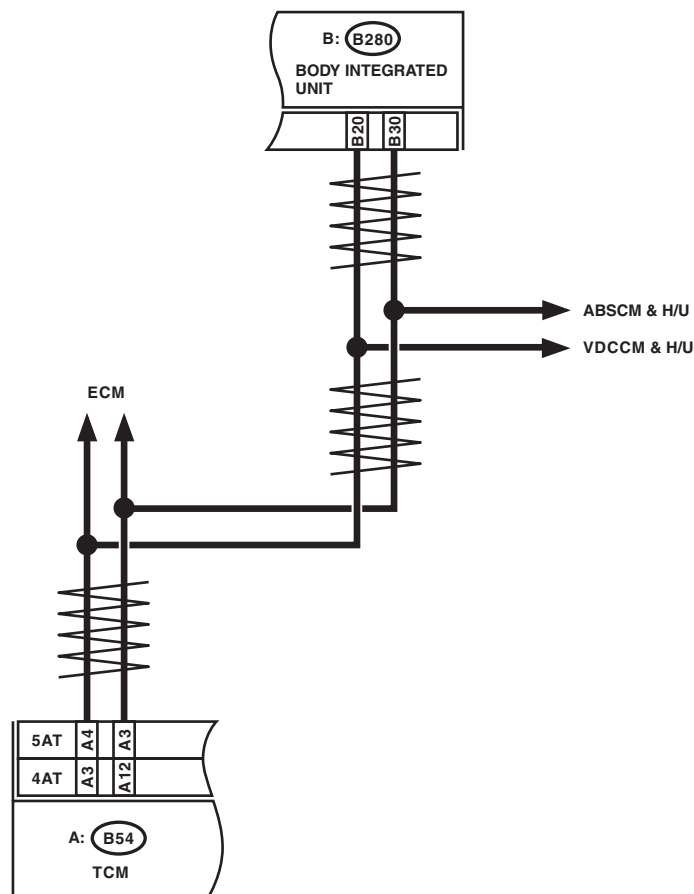
DTC DETECTING CONDITION:

TCM has error, harness between the main harness splice and TCM is open or shorted, connectors are not connected securely, or the terminal has poor crimping.

TROUBLE SYMPTOM:

- SPORT indicator light blinks.
- “Er HC” or “Er tC” is displayed in odo/trip meter.

WIRING DIAGRAM:



LAN00029

Step	Check	Yes	No	
1	<p>CHECK TCM. Read the DTC of the TCM using Subaru Select Monitor. <Ref. to 4AT(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to 5AT(diag)-16, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.></p>	<p>Is DTC other than “CAN communication” displayed?</p>	<p>Perform the diagnosis according to DTC.</p>	<p>Replace the TCM. <Ref. to 4AT-62, Transmission Control Module (TCM).> <Ref. to 5AT-56, Transmission Control Module (TCM).></p>

N: DTC B0213 CAN-HS VDC/ABS DATA ABNORMAL

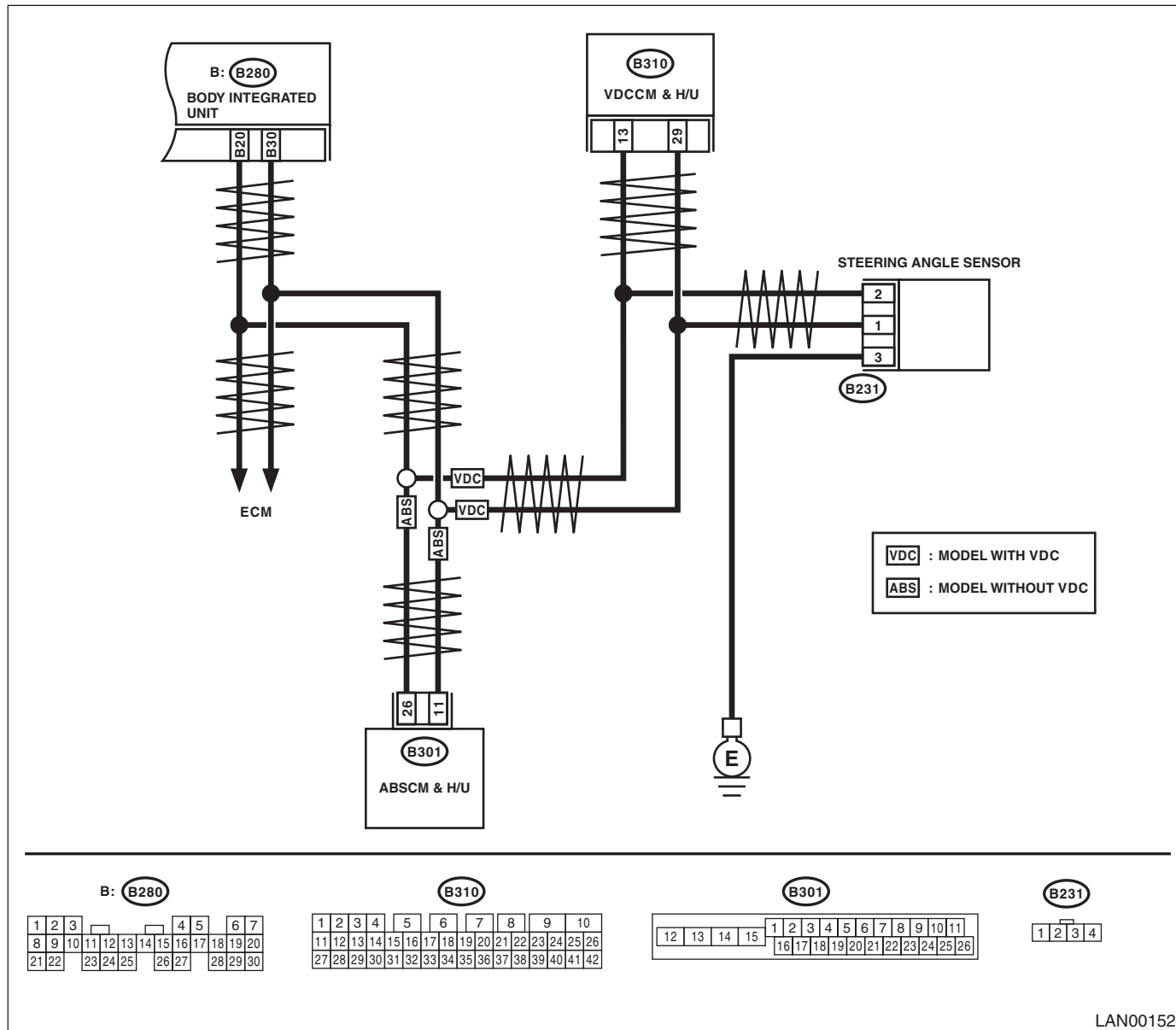
DTC DETECTING CONDITION:

VDC/ABSCM itself is malfunctioning, the main harness is open or shorted, the connector is not connected properly, or the terminal is crimped poorly.

TROUBLE SYMPTOM:

- ABS warning light and VDC warning light come on.
- “Er HC” or “Er Ab” is displayed in odo/trip meter.

WIRING DIAGRAM:



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
1	CHECK VDC/ABSCM. Read the DTC of VDC/ABSCM using the Subaru Select Monitor.	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC.	Replace the VDC/ABSCM. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).> <Ref. to VDC-7, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

O: DTC B0221 CAN-HS ECM NO-RECEIVE DATA

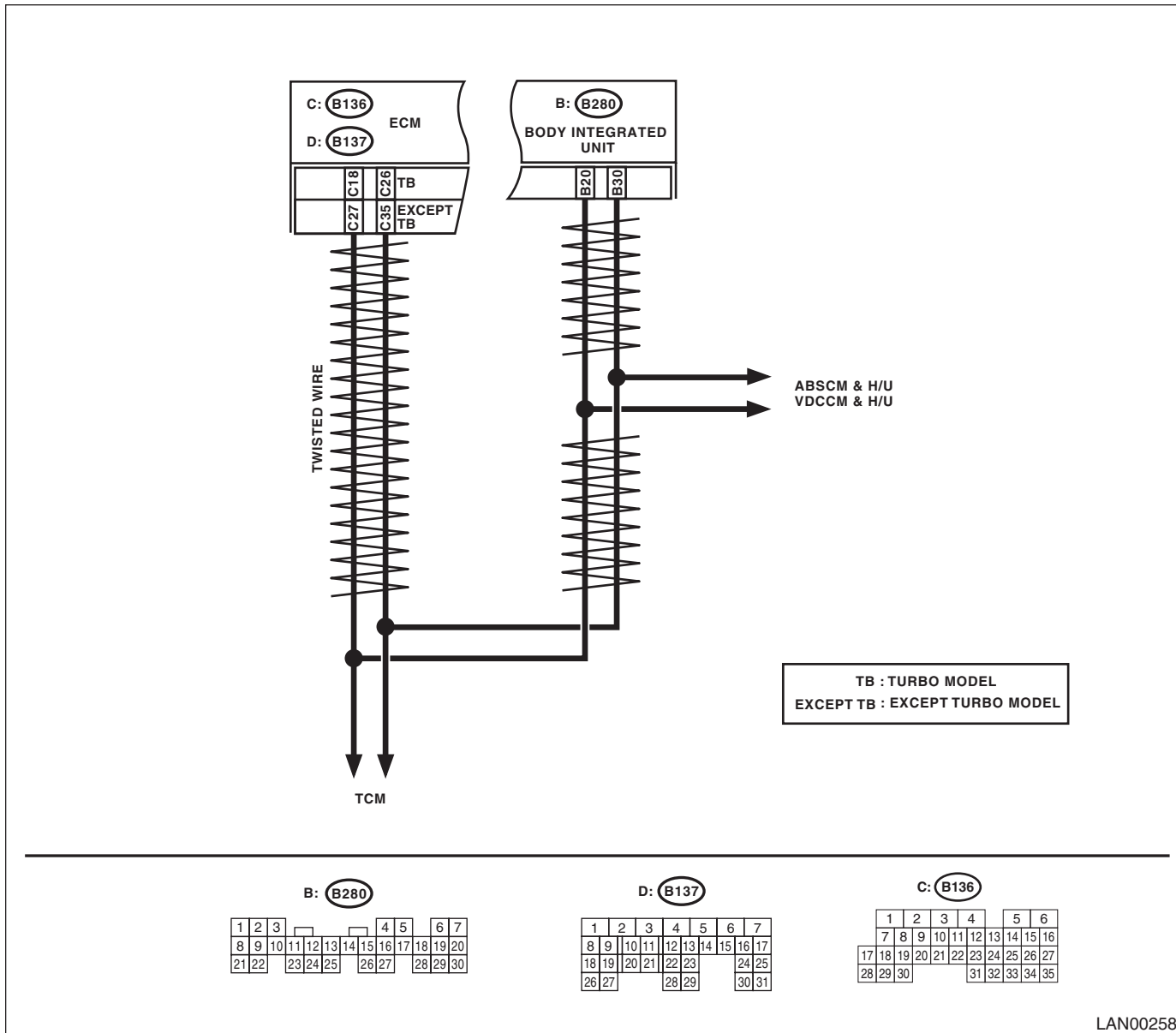
DTC DETECTING CONDITION:

Defective ECM. (If error is in the main harness, DTC P0600 Serial Communication Link is input simultaneously.)

TROUBLE SYMPTOM:

- Malfunction indicator light illuminates.
- "Er HC" is displayed in odo/trip meter.

WIRING DIAGRAM:



LAN00258

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between harness connectors. Connector & terminal (B280) No. 20 — No. 30:	Is the resistance 55 — 65 Ω ? (Specification 60 Ω)	Read the DTC of ECM. Perform the diagnosis according to the DTC. <Ref. to EN(H4SO)(diag)-26, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H4DOTC)(diag)-24, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.> <Ref. to EN(H6DO)(diag)-27, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.>	Go to step 2.
2 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280). 2) Measure the resistance between harness connectors. Connector & terminal (B280) No. 20 — No. 30:	Is the resistance 115 — 125 Ω ? (End resistance or main wiring harness is open.)	Go to step 3.	When $\infty\Omega$, a line related to the body integrated unit is open. Repair the open circuit of harness or replace harness.
3 CHECK HARNESS. 1) Disconnect the ECM connector (B136 or B137). 2) Measure the resistance between harness connector terminals. Connector & terminal Turbo model: (B137) No. 18 — No. 26: All models excluding turbo model: (B136) No. 27 — No. 35:	Is the resistance 115 — 125 Ω ? (End resistance specification 120 Ω)	Go to step 4.	Go to step 5.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
<p>4</p> <p>CHECK ECM.</p> <p>1) Disconnect the ECM connector (B136 or B137).</p> <p>2) Measure the resistance between ECM terminals.</p> <p>Connector & terminal</p> <p>Turbo model:</p> <p>(B137) No. 18 — No. 26:</p> <p>All models excluding turbo model:</p> <p>(B136) No. 27 — No. 35:</p>	<p>Is the resistance between 115 and 125 Ω?</p>	<p>Read the DTC of ECM. Perform the diagnosis according to the DTC.</p> <p><Ref. to EN(H4SO)(diag)-26, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.></p> <p><Ref. to EN(H4DOTC)(diag)-24, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.></p> <p><Ref. to EN(H6DO)(diag)-27, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.></p>	<p>End resistance is open. Replace the ECM. <Ref. to FU(H4SO)-36, Engine Control Module (ECM).></p> <p><Ref. to FU(H4DOTC)-38, Engine Control Module (ECM).></p> <p><Ref. to FU(H6DO)-33, Engine Control Module (ECM).></p>
<p>5</p> <p>CHECK HARNESS.</p> <p>1) Disconnect the ECM connector (B136 or B137).</p> <p>2) Measure the resistance between harness connector and chassis ground.</p> <p>Connector & terminal</p> <p>Turbo model</p> <p>(B137) No. 18 — Chassis ground:</p> <p>(B137) No. 26 — Chassis ground:</p> <p>All models excluding turbo model</p> <p>(B136) No. 27 — Chassis ground:</p> <p>(B136) No. 35 — Chassis ground:</p>	<p>Is resistance less than 10 Ω?</p>	<p>Repair the short circuit of harness or replace harness.</p>	<p>Go to step 6.</p>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
6	<p>CHECK HARNESS.</p> <p>1) Disconnect the body integrated unit (B280), ECM (B136 or B137), TCM (B54), ABS (B301)/VDC (B310) CU connectors.</p> <p>2) Measure the voltage between harness connector and chassis ground while turning the ignition switch to ON.</p> <p>Connector & terminal</p> <p>(B280) No. 20 (+) — Chassis ground (-):</p> <p>(B280) No. 30 (+) — Chassis ground (-):</p>	Is the voltage 6 V or more?	Repair or replace the short circuit of the harness.	<p>Read the DTC of ECM. Perform the diagnosis according to the DTC.</p> <p><Ref. to EN(H4SO)(diag)-26, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.></p> <p><Ref. to EN(H4DOTC)(diag)-24, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.></p> <p><Ref. to EN(H6DO)(diag)-27, READ DIAGNOSTIC TROUBLE CODE (DTC) FOR ENGINE (NORMAL MODE), OPERATION, Subaru Select Monitor.></p>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

P: DTC B0222 CAN-HS TCM NO-RECEIVE DATA

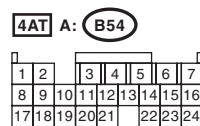
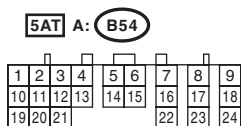
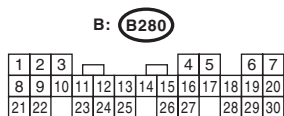
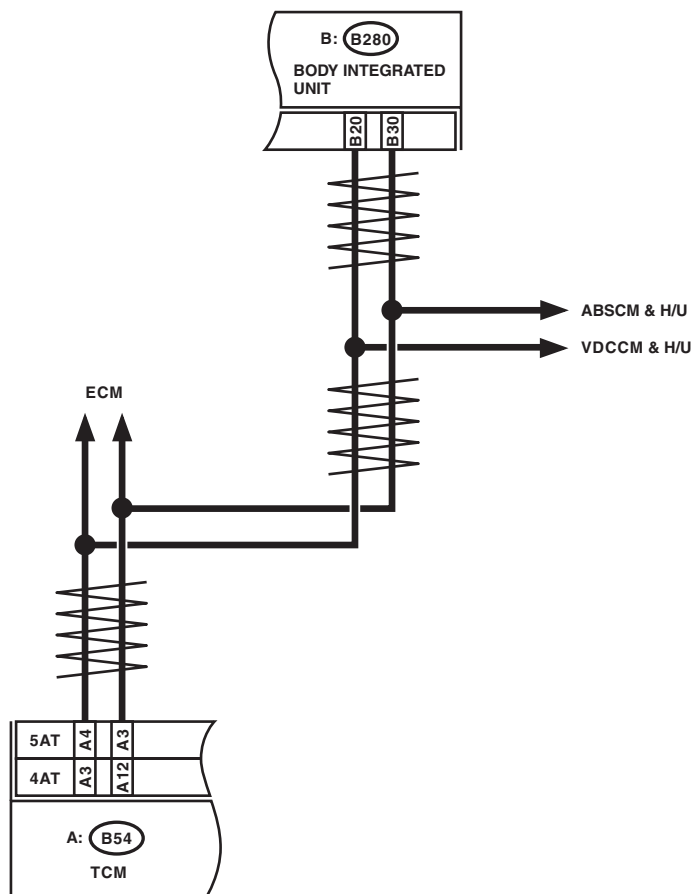
DTC DETECTING CONDITION:

TCM has error, harness between the main harness splice and TCM is open or shorted, connectors are not connected securely, or the terminal has poor crimping.

TROUBLE SYMPTOM:

- Malfunction indicator light illuminates.
- "Er HC" is displayed in odo/trip meter.

WIRING DIAGRAM:



LAN00029

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK HARNESS. 1) Disconnect the TCM connector (B54). 2) Measure the resistance between harness connector terminals. Connector & terminal 4AT model (B54) No. 3 — No. 12: 5AT model (B54) No. 3 — No. 4:	Is the resistance $\infty \Omega$?	Open circuit in related lines of TCM. Repair the open circuit of harness or replace harness.	Go to step 2.
2 CHECK TCM. Read the DTC of the TCM using Subaru Select Monitor. <Ref. to 4AT(diag)-14, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to 5AT(diag)-16, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.>	Is DTC other than "Serial Communication Link" displayed?	Perform the diagnosis according to DTC.	Replace the TCM. <Ref. to 4AT-62, Transmission Control Module (TCM).> <Ref. to 5AT-56, Transmission Control Module (TCM).>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
1	<p>CHECK HARNESS.</p> <p>1) Disconnect the harness connector of body integrated unit.</p> <p>2) Measure the resistance between harness connector terminals.</p> <p>Connector & terminal (B280) No. 20 — No. 30:</p>	Is the resistance between 55 and 65 Ω?	Read the DTC of the VDC/ABSCM, and perform the diagnosis according to the DTC. <Ref. to ABS(diag)-15, READ DIAGNOSTIC TROUBLE CODE (DTC), OPERATION, Subaru Select Monitor.> <Ref. to VDC(diag)-17, OPERATION, Subaru Select Monitor.>	Go to step 2.
2	<p>CHECK HARNESS.</p> <p>1) Disconnect the harness connector of body integrated unit.</p> <p>2) Measure the resistance between harness connector terminals.</p> <p>Connector & terminal (B280) No. 20 — No. 30:</p>	Is the resistance between 115 and 125 Ω?	Go to step 5.	Go to step 3.
3	<p>CHECK HARNESS.</p> <p>1) Disconnect the harness connector of body integrated unit.</p> <p>2) Measure the resistance between harness connector terminal and chassis ground.</p> <p>Connector & terminal (B280) No. 20 — Chassis ground: (B280) No. 30 — Chassis ground:</p>	Is the resistance ∞ Ω?	Open circuit in related line of body integrated unit. Repair the open circuit of harness or replace harness.	Go to step 4.
4	<p>CHECK HARNESS.</p> <p>1) Disconnect the harness connector of body integrated unit.</p> <p>2) Measure the voltage between harness connector terminal and chassis ground. (Ignition switch ON)</p> <p>Connector & terminal (B280) No. 20 (+) — Chassis ground (-): (B280) No. 30 (+) — Chassis ground (-):</p>	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Go to step 5.
5	<p>CHECK END RESISTANCE.</p> <p>1) Disconnect the VDC/ABSCM harness connector.</p> <p>2) Connect a tester and measure the resistance between VDC/ABSCM terminals.</p> <p>Connector & terminal ABS (B301) No. 11 — No. 26: VDC (B310) No. 13 — No. 29:</p>	Is the resistance between 115 and 125 Ω?	Go to step 6.	End resistance is open. Replace the VDC/ABSCM. <Ref. to ABS-6, ABS Control Module and Hydraulic Control Unit (ABSCM&H/U).> <Ref. to VDC-7, VDC Control Module and Hydraulic Control Unit (VDCCM&H/U).>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

	Step	Check	Yes	No
6	<p>CHECK HARNESS.</p> <p>1) Disconnect the body integrated unit connector (B280) and VDC/ABSCM connector (ABS:B301, VDC:B310).</p> <p>2) Measure the resistance between harness connector terminals.</p> <p>Connector & terminal</p> <p>ABS</p> <p><i>(B301) No. 11 — (B280) No. 30:</i></p> <p><i>(B301) No. 26 — (B280) No. 20:</i></p> <p>VDC</p> <p><i>(B310) No. 13 — (B280) No. 20:</i></p> <p><i>(B310) No. 29 — (B280) No. 30:</i></p>	Is resistance less than 10 Ω?	Go to step 7.	Main wiring harness is open. Repair the open circuit of harness or replace harness.
7	<p>CHECK VDC/ABSCM.</p> <p>1) Connect all connectors.</p> <p>2) Read the DTC of VDC/ABSCM using the Subaru Select Monitor.</p>	Is DTC other than "CAN communication" displayed?	Perform the diagnosis according to DTC of VDC/ABSCM.	Temporary poor contact occurs. Check the connection of connectors and terminals.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

R: DTC B0300 CAN-LS MALFUNCTION

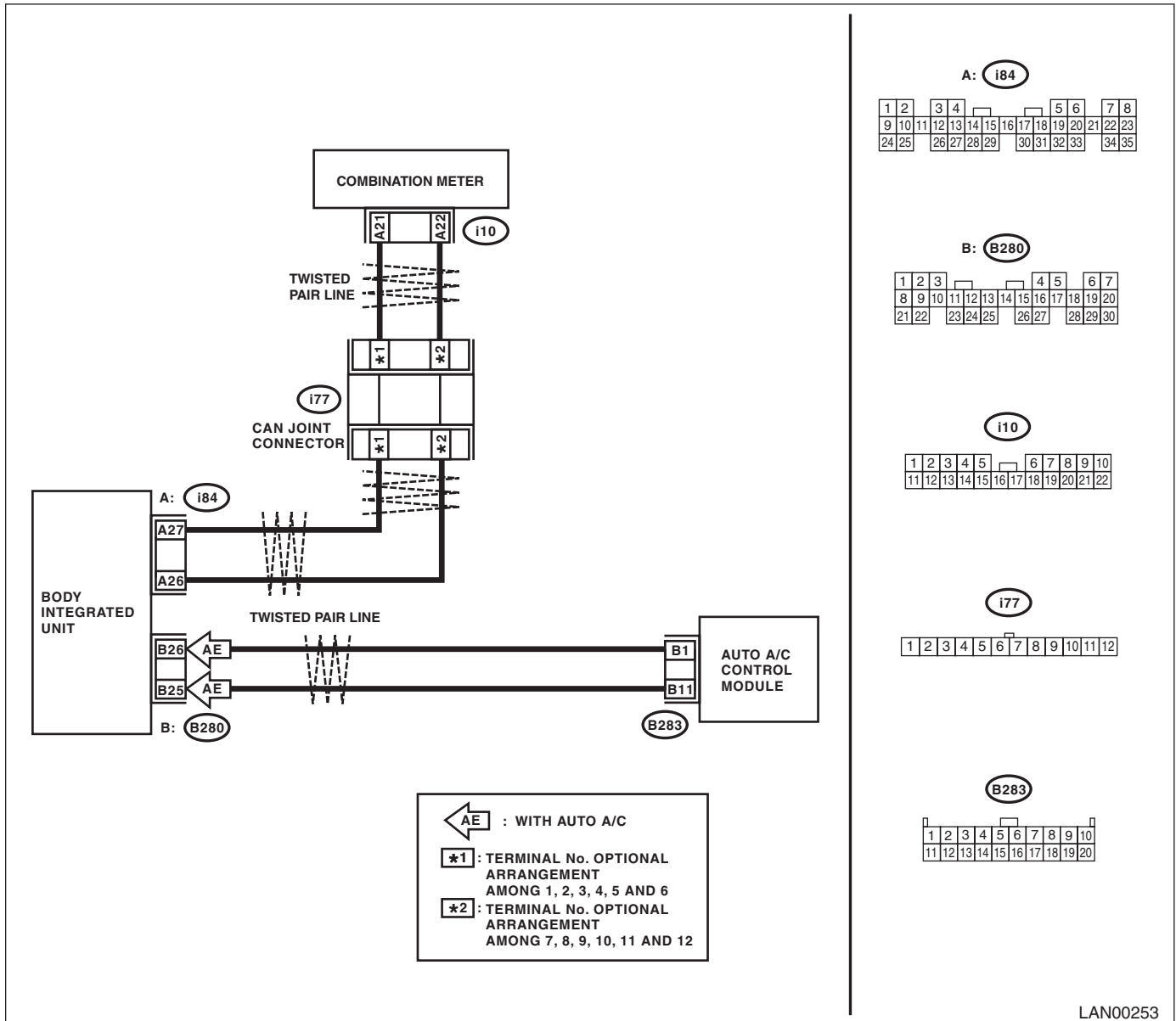
DTC DETECTING CONDITION:

Either end of low-speed CAN communication line is open or shorted, the connector is not connected properly, or the terminal has poor crimping.

TROUBLE SYMPTOM:

"Er LC" is displayed in odo/trip meter, but communicating function is OK.

WIRING DIAGRAM:



Step	Check	Yes	No
1	CHECK DTC. Read the DTC of body integrated unit using Subaru Select Monitor.	Is there any DTC other than B0300?	Perform the diagnosis according to other DTC. Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed currently malfunctioning?	Check the connection of harness connector. Go to step 3. Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF and read the DTC again.	Is B0300 currently malfunctioning?	Go to step 4. Temporary poor contact occurs.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
4 CHECK CURRENT DATA. Connect the Subaru Select Monitor and display current data of the body integrated unit (auto A/C fail).	Is OK displayed?	Go to step 5.	Perform auto A/C self-diagnosis. <Ref. to AC(diag)-9, OPERATION, Diagnostic Chart for Self-diagnosis.>
5 CHECK AUTO A/C ECM. 1) Turn the ignition switch to OFF. 2) Disconnect the auto A/C ECM connector (B283). 3) Turn the ignition switch to ON and read the DTC.	Does B0300 disappear?	Go to step 6.	Go to step 7.
6 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280) and auto A/C control module connector (B283). 2) Check for open and short circuits between body integrated unit connector and auto A/C control module connector. Connector & terminal (B283) No. 1 — (B280) No. 26: (B283) No. 11 — (B280) No. 25:	Is the harness in normal condition?	Replace the auto A/C ECM. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.
7 CHECK CURRENT DATA. Connect the Subaru Select Monitor and display current data of the body integrated unit (meter fail).	Is OK displayed?	Go to step 8.	Replace the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.>
8 CHECK COMBINATION METER. 1) Turn the ignition switch to OFF. 2) Disconnect the combination meter connector. 3) Turn the ignition switch to ON.	Is B0300 detected?	Go to step 10.	Go to step 9.
9 CHECK HARNESS. 1) Disconnect the combination meter connector (i10). 2) Check for open and short circuits between the body integrated unit and combination meter connectors. Connector & terminal (i10) No. 21 — (i84) No. 27: (i10) No. 22 — (i84) No. 26:	Is the harness in normal condition?	Replace the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.>	Repair or replace the open or short circuit of harness.
10 CHECK HARNESS. 1) Disconnect the CAN junction connector (i77) and the body integrated unit connector (i84). 2) Measure the resistance between connector terminals. Connector & terminal (i84) No. 27 — (i77) No. 2: (i84) No. 26 — (i77) No. 8: NOTE: The junction connector of i77 is in user defined alignment.	Is the resistance less than 10 Ω?	Go to step 11.	Repair the short circuit of harness or replace harness.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
11 CHECK HARNESS. 1) Disconnect the combination meter connector. 2) Measure the resistance between the junction connector and the combination meter connector. Connector & terminal <i>(i10) No. 21 — (i77) No. 1:</i> <i>(i10) No. 22 — (i77) No. 7:</i>	Is the resistance less than 10 Ω?	Go to step 12.	Repair the open circuit of harness or replace harness.
12 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280) and auto A/C control module connector (B283). 2) Measure the resistance between body integrated unit connector and auto A/C control module connector. Connector & terminal <i>(B283) No. 1 — (B280) No. 26:</i> <i>(B283) No. 11 — (B280) No. 25:</i>	Is the resistance less than 10 Ω?	Go to step 13.	Repair the open circuit of harness or replace harness.
13 CHECK HARNESS. 1) Connect the junction connector. 2) Measure the resistance between body integrated unit connector and chassis ground. Connector & terminal <i>(B280) No. 25 — Chassis ground:</i> <i>(B280) No. 26 — Chassis ground:</i> <i>(i84) No. 26 — Chassis ground:</i> <i>(i84) No. 27 — Chassis ground:</i>	Is the resistance less than 10 Ω?	Repair the short circuit of harness or replace harness.	Go to step 14.
14 CHECK HARNESS. 1) Turn the ignition switch to ON. 2) Measure the voltage between body integrated unit connector and chassis ground. Connector & terminal <i>(B280) No. 25 (+) — Chassis ground (-):</i> <i>(B280) No. 26 (+) — Chassis ground (-):</i> <i>(i84) No. 26 (+) — Chassis ground (-):</i> <i>(i84) No. 27 (+) — Chassis ground (-):</i>	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Replace the body integrated unit. <Ref. to SL-55, REMOVAL, Body Integrated Unit.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

S: DTC B0301 CAN-LS COUNTER ABNORMAL

DTC DETECTING CONDITION:

Find the unit in which trouble occurs and open or short CAN line, and repair and replace them.

(Free running counter error may be detected at the same time from the unit in which the malfunction occurs.)

TROUBLE SYMPTOM:

“Er LC” is displayed in odo/trip meter.

Step	Check	Yes	No	
1	CHECK DTC. Read the DTC of body integrated unit using Subaru Select Monitor.	Is there any DTC other than B0301?	Perform the diagnosis according to other DTC.	Go to step 2.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed currently malfunctioning?	Check the connection of harness connector. Go to step 3.	Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF and read the DTC again.	Is B0301 currently malfunctioning?	Go to step 4.	Temporary poor contact occurs.
4	CHECK CURRENT DATA. Connect the Subaru Select Monitor and display current data of the body integrated unit (auto A/C fail).	Is OK displayed?	Go to step 5.	Perform auto A/C self-diagnosis. <Ref. to AC(diag)-9, OPERATION, Diagnostic Chart for Self-diagnosis.>
5	CHECK AUTO A/C ECM. 1) Turn the ignition switch to OFF. 2) Disconnect the auto A/C ECM connector. 3) Turn the ignition switch to ON.	Does the communications error display disappear?	Go to step 6.	Go to step 7.
6	CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280) and auto A/C control module connector (B283). 2) Check for open and short circuits between body integrated unit connector and auto A/C control module connector. Connector & terminal (B283) No. 11 — (B280) No. 26: (B283) No. 1 — (B280) No. 25:	Is the harness in normal condition?	Replace the auto A/C ECM. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.
7	CHECK CURRENT DATA. Connect the Subaru Select Monitor and display current data of the body integrated unit (meter fail).	Is OK displayed?	Go to step 8.	Replace the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.>
8	CHECK COMBINATION METER. 1) Turn the ignition switch to OFF. 2) Disconnect the combination meter connector. 3) Turn the ignition switch to ON.	Is B0301 detected?	Go to step 9.	Replace the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.>
9	CHECK HARNESS. 1) Disconnect the combination meter connector (i10). 2) Check for open and short circuits between the body integrated unit and combination meter connectors. Connector & terminal (i10) No. 21 — (i84) No. 27: (i10) No. 22 — (i84) No. 26:	Is the harness in normal condition?	Go to step 10.	Repair or replace the open or short circuit of harness.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
10 CHECK CURRENT DATA. Check the current data of the body integrated unit (center display fail).	Is OK displayed?	Go to step 11.	Repair or replace the center display. <Ref. to ET-16, REMOVAL, Navigation Display.>
11 CHECK CENTER DISPLAY. 1) Turn the ignition switch to OFF. 2) Disconnect the center display connector. 3) Turn the ignition switch to ON.	Does B0300 disappear?	Go to step 12.	Go to step 13.
12 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280) and the center display connector (i90 or i103). 2) Check for open and short circuits between the body integrated unit connector and the center display connector. Connector & terminal Model with navigation (i90) No. 6 — (i84) No. 26: (i90) No. 14 — (i84) No. 27: Model without navigation (i103) No. 2 — (i84) No. 26: (i103) No. 4 — (i84) No. 27:	Is the harness in normal condition?	Replace the center display. <Ref. to ET-16, REMOVAL, Navigation Display.>	Repair or replace the open or short circuit of harness.
13 CHECK COMBINATION METER. 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Display the door switch in analog data. 3) Read the display of data and combination meter when each door is opened/closed.	Do the body integrated unit data indicator and combination meter indicator change according to operation?	Go to step 14.	Go to step 16.
14 CHECK AUTO A/C CONTROL MODULE. 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Display the number of blower fan levels in the analog data. 3) Read the data display when the number of blower fan levels is changed on air conditioner control part.	Does the data display change?	Go to step 15.	Go to step 17.
15 CHECK AUTO A/C CONTROL MODULE HARNESS. 1) Disconnect the auto A/C control module connector. 2) Disconnect the body integrated unit connector. 3) Measure the resistance between the body integrated unit and auto A/C control module harness. Connector & terminal (B280) No. 26 — (B283) No. 1: (B280) No. 25 — (B283) No. 11:	Is the resistance less than 10 Ω ?	Go to step 17.	Repair the open circuit of harness or replace harness.
16 CHECK COMBINATION METER HARNESS. 1) Disconnect the combination meter connector. 2) Disconnect the body integrated unit connector. 3) Measure the resistance between the body integrated unit and combination meter connector. Connector & terminal (i84) No. 27 — (i10) No. 21: (i84) No. 26 — (i10) No. 22:	Is the resistance less than 10 Ω ?	Go to step 18.	Repair the open circuit of harness or replace harness.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
17 CHECK AUTO A/C CONTROL MODULE. Perform auto A/C control module self-diagnosis. <Ref. to AC(diag)-12, A/C CONTROL SYSTEM SELF-DIAGNOSIS, OPERATION, Diagnostic Chart for Self-diagnosis.>	Is the self-diagnosis OK?	Go to step 18 .	Replace the auto A/C control module. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>
18 CHECK COMBINATION METER. Perform self-diagnosis for the combination meter system. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Go to step 19 .	Replace the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.>
19 CHECK THE BODY INTEGRATED UNIT. Read the data of "body integrated unit data received" on ECM data display using Subaru Select Monitor.	Is "Yes" displayed?	Go to step 20 .	Replace the body integrated unit. <Ref. to SL-55, REMOVAL, Body Integrated Unit.>
20 CHECK THE BODY INTEGRATED UNIT. Read the data of "body integrated unit counter update" on ECM data display using Subaru Select Monitor.	Is "Yes" displayed?	Temporary poor contact occurs. Check the connection of connector.	Replace the body integrated unit. <Ref. to SL-55, REMOVAL, Body Integrated Unit.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

T: DTC B0302 CAN-LS BUS OFF

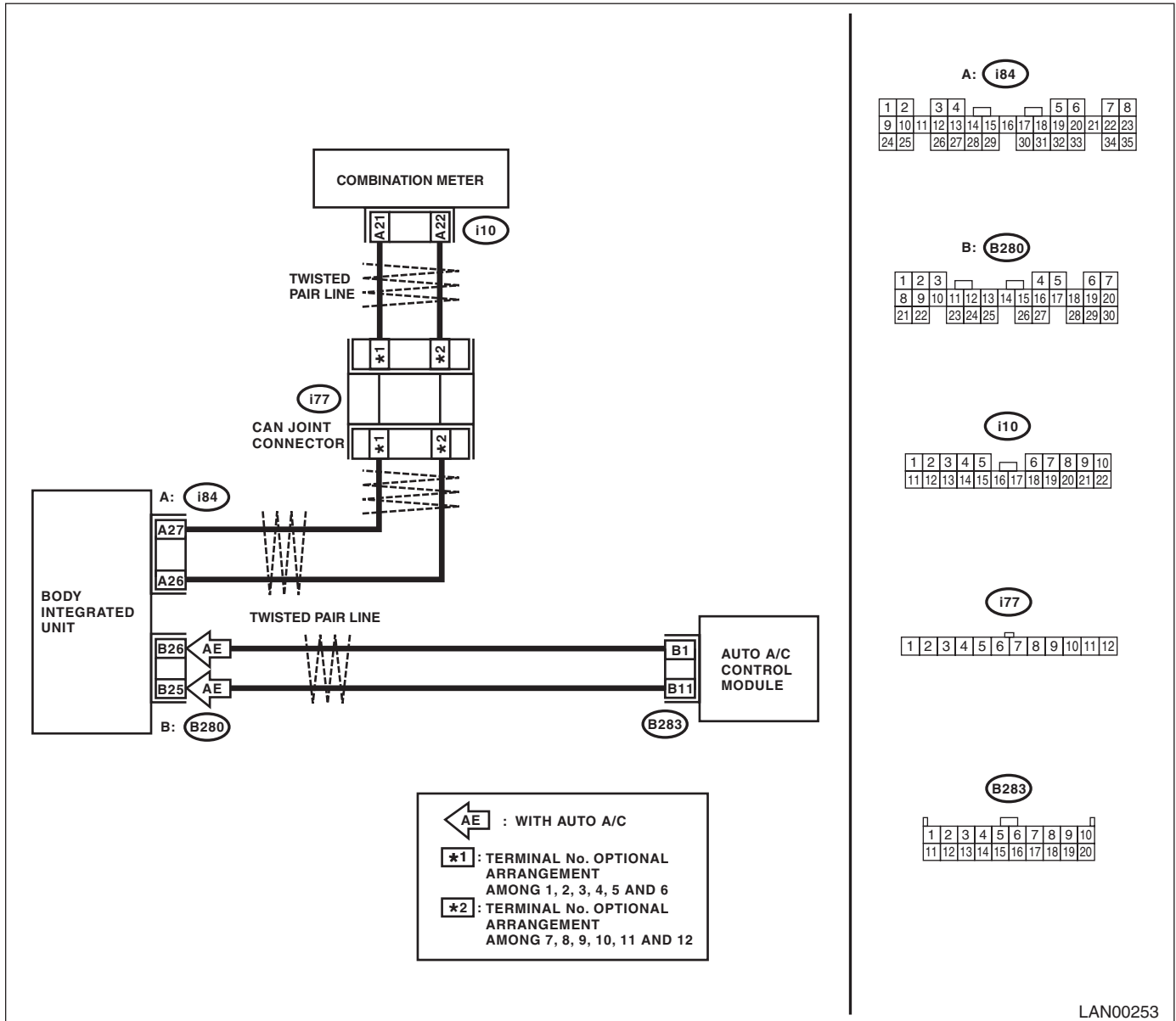
DTC DETECTING CONDITION:

Because of a lot of error data occurred, some units have been disconnected not to affect other units. Communication failure from the unit in which error is occurred is input at the same time.

TROUBLE SYMPTOM:

“Er LC” is displayed in odo/trip meter.

WIRING DIAGRAM:



Step	Check	Yes	No
1	CHECK DTC. Read the DTC of body integrated unit using Subaru Select Monitor.	Is there any DTC other than B0302?	Perform the diagnosis according to other DTC.
2	CHECK DTC. Check the DTC displayed in the body integrated unit.	Is the DTC displayed currently malfunctioning?	Check the connection of harness connector. Go to step 3.
3	CHECK DTC. Turn the ignition switch to OFF and read the DTC again.	Is B0302 currently malfunctioning?	Go to step 4. Temporary poor contact occurs.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
4 CHECK CURRENT DATA. Connect the Subaru Select Monitor and display current data of the body integrated unit (auto A/C fail).	Is OK displayed?	Go to step 5.	Perform auto A/C self-diagnosis. <Ref. to AC(diag)-9, OPERATION, Diagnostic Chart for Self-diagnosis.>
5 CHECK AUTO A/C ECM. 1) Turn the ignition switch to OFF. 2) Disconnect the auto A/C ECM connector. 3) Turn the ignition switch to ON.	Does B0302 disappear?	Go to step 6.	Go to step 7.
6 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280) and auto A/C control module connector (B283). 2) Check for open and short circuits between body integrated unit connector and auto A/C control module connector. Connector & terminal (B283) No. 1 — (B280) No. 26: (B283) No. 11 — (B280) No. 25:	Is the harness in normal condition?	Replace the auto A/C ECM. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>	Repair or replace the open or short circuit of harness.
7 CHECK CURRENT DATA. Connect the Subaru Select Monitor and display current data of the body integrated unit (meter fail).	Is OK displayed?	Go to step 8.	Replace the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.>
8 CHECK COMBINATION METER. 1) Turn the ignition switch to OFF. 2) Disconnect the combination meter connector. 3) Turn the ignition switch to ON.	Is B0302 detected?	Go to step 9.	Replace the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.>
9 CHECK HARNESS. 1) Disconnect the combination meter connector (i10). 2) Check for open and short circuits between the body integrated unit and combination meter connectors. Connector & terminal (i10) No. 21 — (i84) No. 27: (i10) No. 22 — (i84) No. 26:	Is the harness in normal condition?	Go to step 10.	Repair or replace the open or short circuit of harness.
10 CHECK CURRENT DATA. Check the current data of the body integrated unit (center display fail).	Is OK displayed?	Go to step 11.	Repair or replace the center display. <Ref. to ET-16, REMOVAL, Navigation Display.>
11 CHECK CENTER DISPLAY. 1) Turn the ignition switch to OFF. 2) Disconnect the center display connector. 3) Turn the ignition switch to ON.	Does B0302 disappear?	Go to step 12.	Go to step 13.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
12 CHECK HARNESS. 1) Disconnect the body integrated unit connector (B280) and the center display connector (i90 or i103). 2) Check for open and short circuits between the body integrated unit connector and the center display connector. Connector & terminal Model with navigation (i90) No. 6 — (i84) No. 26: (i90) No. 14 — (i84) No. 27: Model without navigation (i103) No. 2 — (i84) No. 26: (i103) No. 4 — (i84) No. 27:	Is the harness in normal condition?	Replace the center display. <Ref. to ET-16, REMOVAL, Navigation Display.>	Repair or replace the open or short circuit of harness.
13 CHECK COMBINATION METER. 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Display the door switch in analog data. 3) Read the display of data and combination meter when each door is opened/closed.	Do the body integrated unit data indicator and combination meter indicator change according to operation?	Go to step 14.	Go to step 15.
14 CHECK AUTO A/C CONTROL MODULE HARNESS. 1) Disconnect the auto A/C control module connector. 2) Disconnect the body integrated unit connector. 3) Measure the resistance between the body integrated unit and auto A/C control module harness. Connector & terminal (B280) No. 26 — (B283) No. 1: (B280) No. 25 — (B283) No. 11:	Is the resistance less than 10 Ω ?	Go to step 15.	Repair the open circuit of harness or replace harness.
15 CHECK COMBINATION METER HARNESS. 1) Disconnect the combination meter connector. 2) Disconnect the body integrated unit connector. 3) Measure the resistance between the body integrated unit and combination meter connector. Connector & terminal (i84) No. 27 — (i10) No. 21: (i84) No. 26 — (i10) No. 22:	Is the resistance less than 10 Ω ?	Go to step 16.	Repair the open circuit of harness or replace harness.
16 CHECK AUTO A/C CONTROL MODULE. Perform auto A/C control module self-diagnosis. <Ref. to AC(diag)-12, A/C CONTROL SYSTEM SELF-DIAGNOSIS, OPERATION, Diagnostic Chart for Self-diagnosis.>	Is the self-diagnosis OK?	Go to step 17.	Replace the auto A/C control module. <Ref. to AC-32, REMOVAL, Control Unit (Auto A/C Model).>
17 CHECK COMBINATION METER. Perform self-diagnosis for the combination meter system. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Replace the body integrated unit. <Ref. to SL-55, REMOVAL, Body Integrated Unit.>	Replace the combination meter. <Ref. to IDI-14, REMOVAL, Combination Meter.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

U: DTC B0311 CAN-LS METER UNIT DATA ABNORMAL

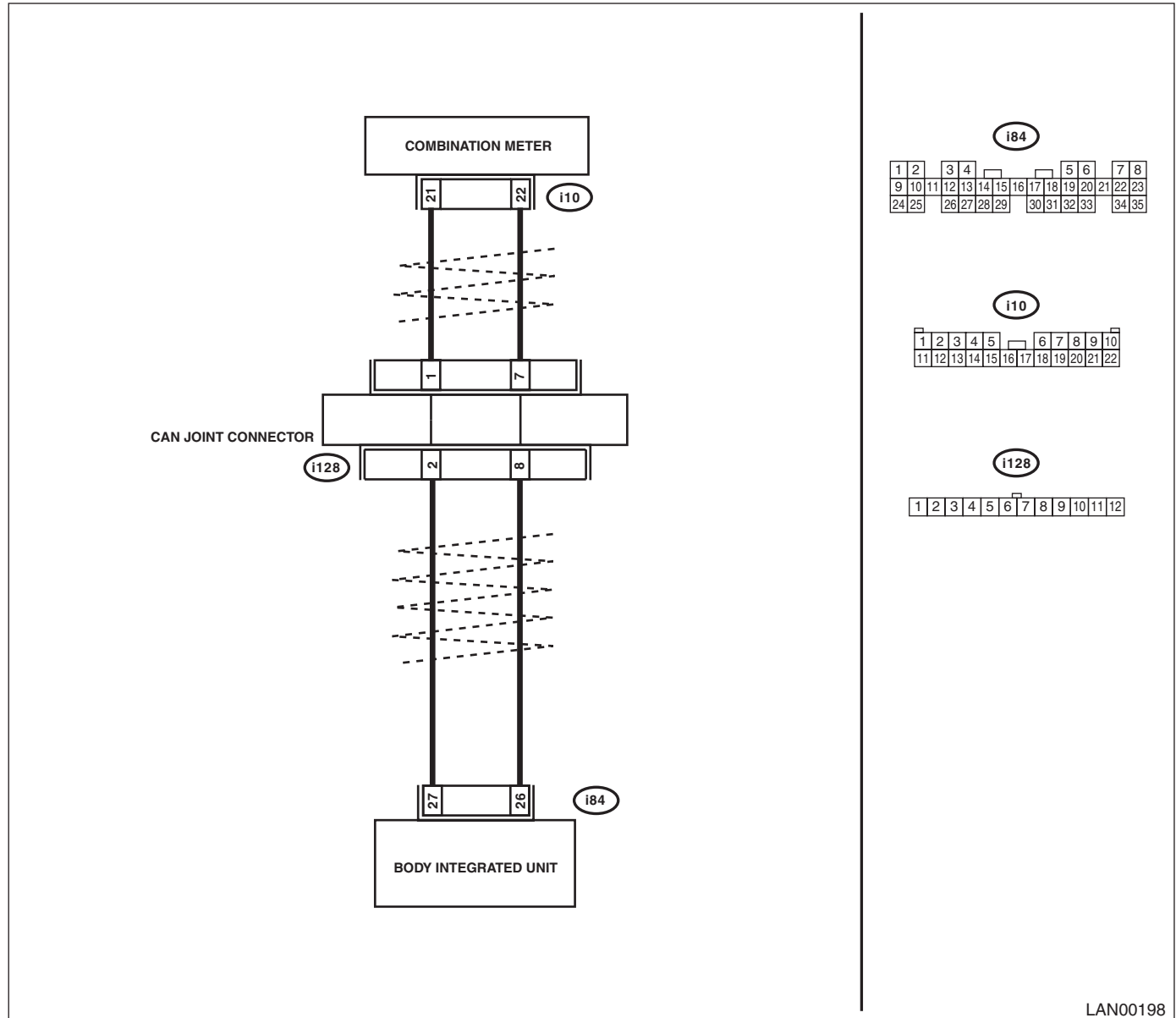
DTC DETECTING CONDITION:

Combination meter has error, the harness between main harness splice and combination meter is open or shorted, the connector is not connected properly, or the terminal has poor crimping.

TROUBLE SYMPTOM:

"Er Lc" is displayed in odo/trip meter.

WIRING DIAGRAM:



LAN00198

Step	Check	Yes	No
1 CHECK COMBINATION METER. Perform self-diagnosis of the combination meter. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Read the DTC again, and then perform the diagnosis according to DTC displayed on the top.	Replace the combination meter. <Ref. to IDI-14, Combination Meter.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

V: DTC B0313 CAN-LS MONITOR DATA ABNORMAL

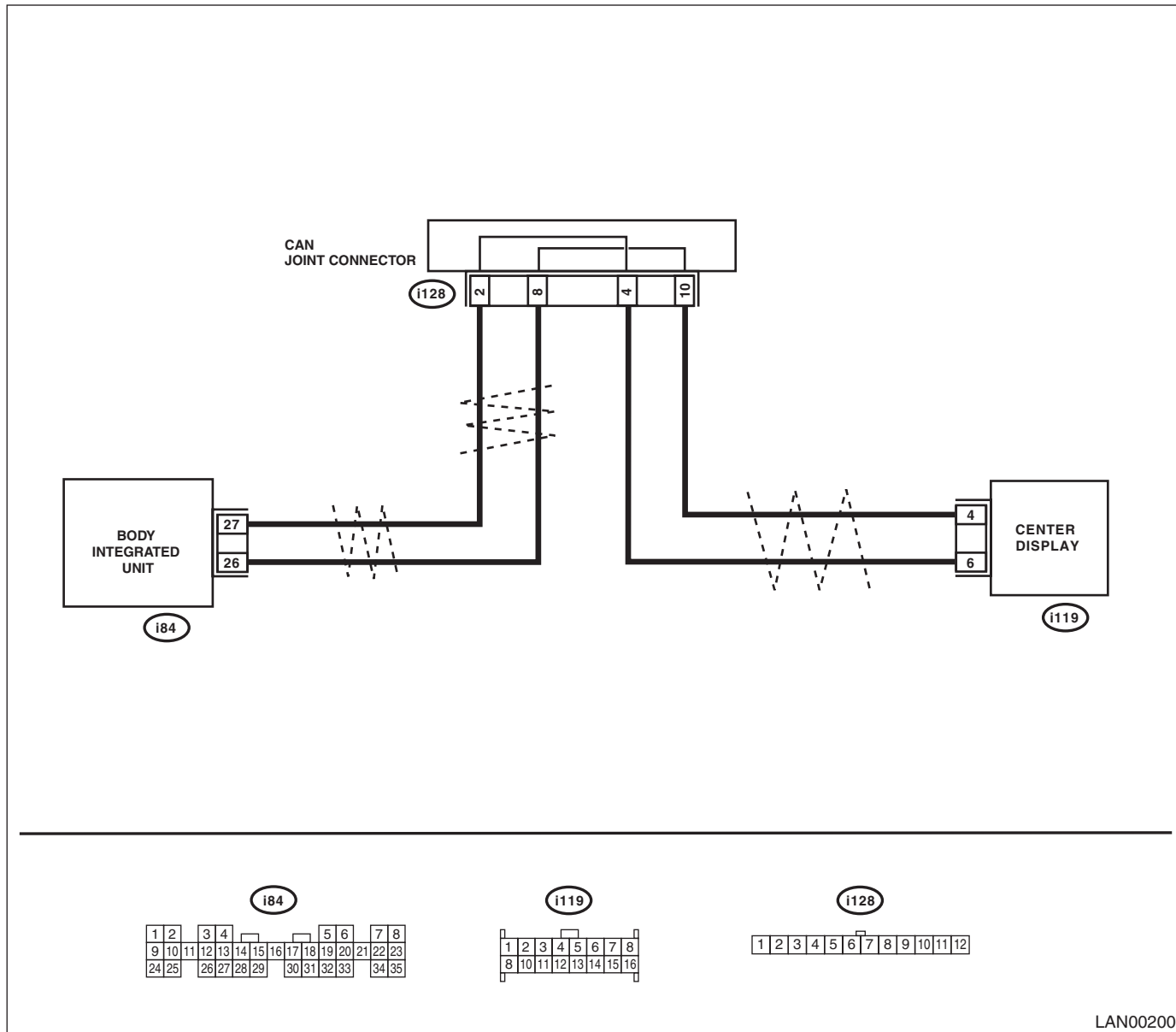
DTC DETECTING CONDITION:

Center display unit error, or harness between the main harness splice and center display unit is open or shorted, the connector is not connected securely and the terminal has poor crimping.

TROUBLE SYMPTOM:

“Er LC” is displayed in odo/trip meter.

WIRING DIAGRAM:



LAN00200

Step	Check	Yes	No
1 CHECK CENTER DISPLAY. 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Read the center display fail display.	Is the center display fail OK?	Go to step 2.	Replace the center display.
2 CHECK NAVIGATION. 1) Display the current data of body integrated unit using Subaru Select Monitor. 2) Read the NAVI fail display.	Is the NAVI fail OK?	Replace the center display.	Repair the navigation unit.

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

W: DTC B0321 CAN-LS METER NO-RECEIVE DATA

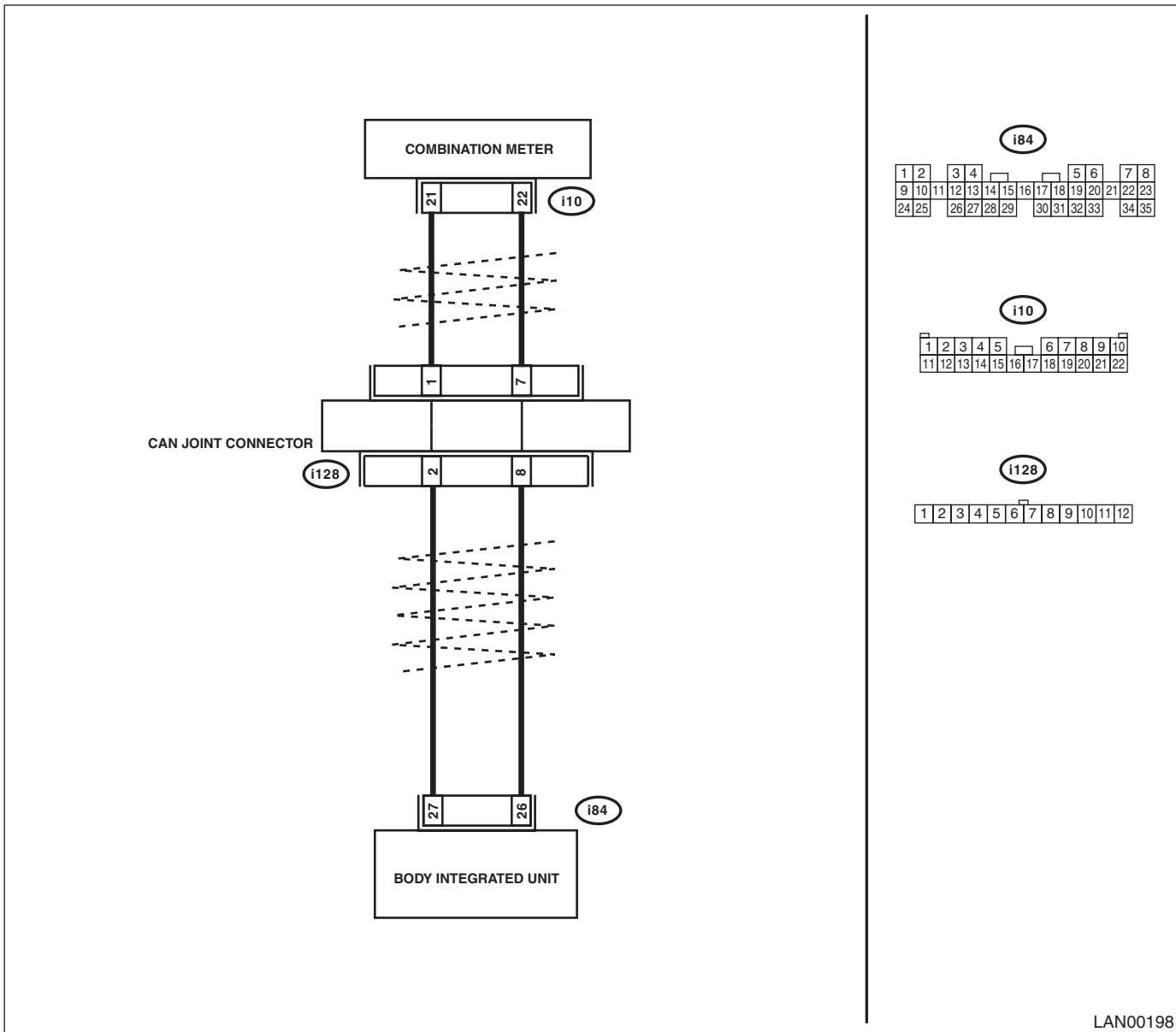
DTC DETECTING CONDITION:

Combination meter unit error, or harness between the main harness splice and combination meter unit is open or shorted, the connector is not connected properly and the terminal has poor crimping.

TROUBLE SYMPTOM:

Fail mode occurs because the data is not received from combination meter unit.

WIRING DIAGRAM:



Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK COMMUNICATION LINE. 1) Warm up the engine. 2) Compare the data of body integrated unit and combination meter using Subaru Select Monitor. Check item: <ul style="list-style-type: none"> • Engine speed • All door switches • P Switch 	Is the data displayed same?	Go to step 2.	Perform self-diagnosis of the combination meter. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>
2 CHECK HARNESS. 1) Disconnect the body integrated unit and combination meter connector. 2) Measure the resistance between harness connectors. Connector & terminal <i>(i10) No. 21 — (i84) No. 27:</i> <i>(i10) No. 26 — (i84) No. 26:</i>	Is resistance less than 10 Ω?	Go to step 4.	Go to step 3.
3 CHECK HARNESS. 1) Disconnect the CAN joint connector (i77) with the connector of the unit disconnected. 2) Measure the resistance between harness connectors. Connector & terminal <i>(i10) No. 21 — (i128) No. 1:</i> <i>(i10) No. 26 — (i128) No. 7:</i> <i>(i84) No. 27 — (i128) No. 2:</i> <i>(i84) No. 26 — (i128) No. 8:</i>	Is resistance less than 10 Ω?	Go to step 4.	Repair or replace the open circuit of harness.
4 CHECK HARNESS. Measure the resistance between harness connector (i77) and chassis ground. Connector & terminal <i>(i128) No. 1 — Chassis ground:</i> <i>(i128) No. 7 — Chassis ground:</i> <i>(i128) No. 2 — Chassis ground:</i> <i>(i128) No. 8 — Chassis ground:</i>	Is resistance less than 10 Ω?	Repair the short circuit of harness or replace harness.	Go to step 5.
5 CHECK HARNESS. 1) Turn the ignition switch to ON. 2) Measure the voltage between harness connector (i77) and chassis ground. Connector & terminal <i>(i128) No. 1 (+) — Chassis ground (-):</i> <i>(i128) No. 7 (+) — Chassis ground (-):</i> <i>(i128) No. 2 (+) — Chassis ground (-):</i> <i>(i128) No. 8 (+) — Chassis ground (-):</i>	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Go to step 6.
6 CHECK COMBINATION METER. Perform self-diagnosis of the combination meter. <Ref. to IDI-3, SELF-DIAGNOSIS, INSPECTION, Combination Meter System.>	Is the self-diagnosis OK?	Temporary poor contact occurs.	Check the connection of connector. Replace the combination meter. <Ref. to IDI-14, Combination Meter.>

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

X: DTC B0500 KEYLESS UART COM. MALFUNCTION

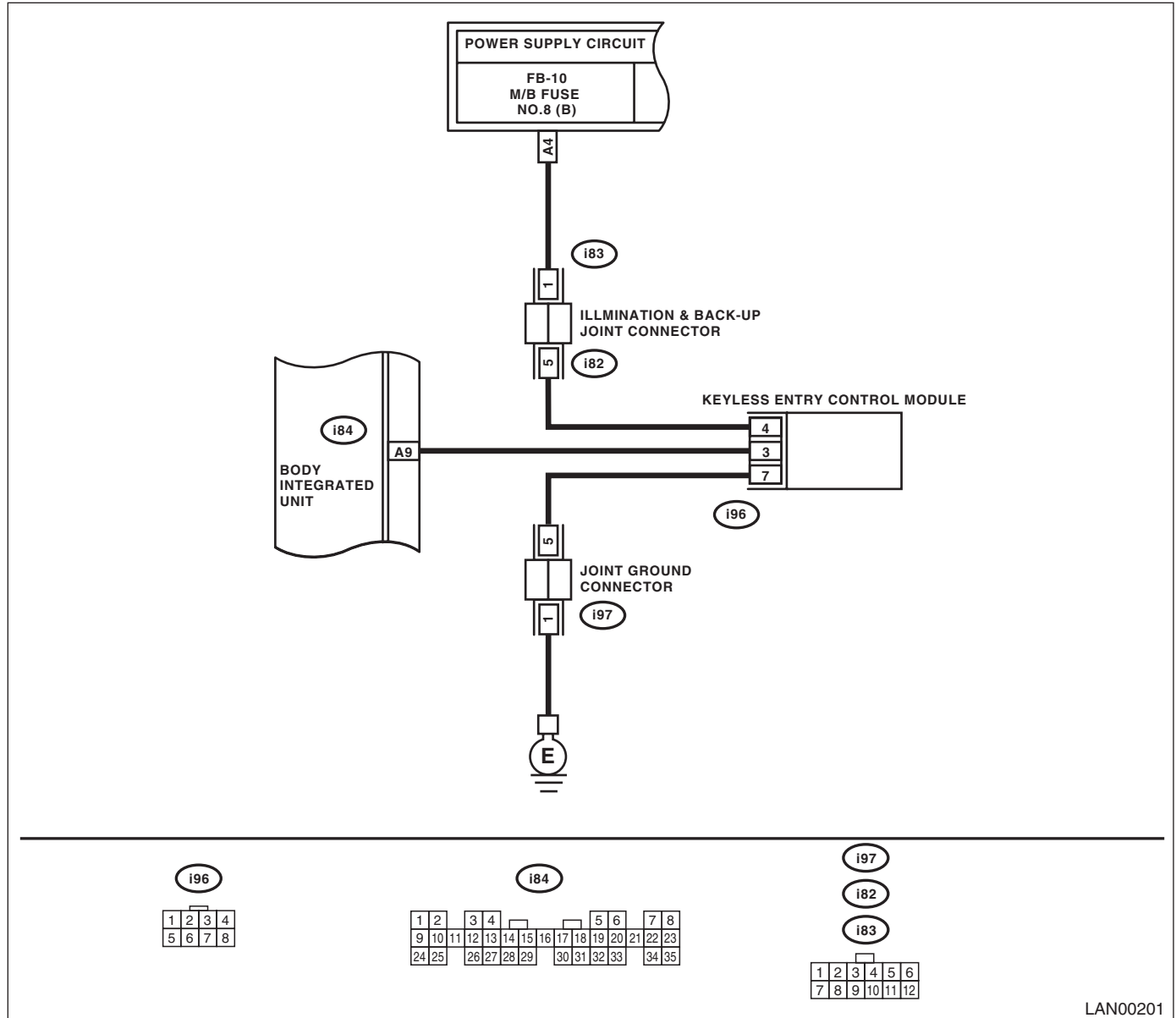
DTC DETECTING CONDITION:

UART between keyless control unit and body integrated unit is open or shorted, the connector is not connected properly, or the terminal is crimped improperly.

TROUBLE SYMPTOM:

Door lock does not operate with keyless.

WIRING DIAGRAM:



LAN00201

Diagnostic Procedure with Diagnostic Trouble Code (DTC)

LAN SYSTEM (DIAGNOSTICS)

Step	Check	Yes	No
1 CHECK HARNESS. 1) Disconnect the body integrated unit connector (i84) and keyless entry control module connector (i96). 2) Measure the resistance between harnesses. Connector & terminal (i84) No. 9 — (i96) No. 3:	Is resistance less than 10 Ω ?	Go to step 2.	Repair the open circuit of harness or replace harness.
2 CHECK HARNESS. Measure the resistance between harness connector and chassis ground. Connector & terminal (i84) No. 9 — Chassis ground:	Is the resistance less than 1 M Ω ?	Repair the short circuit of harness or replace harness.	Go to step 3.
3 CHECK HARNESS. 1) Turn the ignition switch to ON. 2) Measure the voltage between harness connector and chassis ground. Connector & terminal (i84) No. 9 (+) — Chassis ground (-):	Is the voltage 6 V or more?	Repair the short circuit of harness or replace harness.	Go to step 4.
4 OPERATION CHECK. Check the door lock operation when the doors LOCK/UNLOCK using manual LOCK switch.	Does it operate on switch operation?	Go to step 5.	Replace the body integrated unit. <Ref. to SL-55, Body Integrated Unit.>
5 OPERATION CHECK. 1) Disconnect the key warning switch connector (B350). 2) Close all the doors, and then perform the LOCK/UNLOCK operation on keyless entry operation.	Does it operate?	Check key warning switch.	Replace the keyless entry control module. <Ref. to SL-53, Keyless Entry Control Module.>